PAY CUTS VS. DOWNSIZING:

COMPARING THEIR EFFECTS ON WORK ATTITUDES

OF REMAINING EMPLOYEES

A Dissertation

Presented to the Faculty of the Graduate School

of Cornell University

In Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

by

Yeong Joon Yoon

May 2017

© 2017 Yeong Joon (YJ) Yoon

PAY CUTS VS. DOWNSIZING:

COMPARING THEIR EFFECTS ON WORK ATTITUDES OF REMAINING EMPLOYEES

Yeong Joon (YJ) Yoon, Ph. D.

Cornell University 2017

Despite the increase in payroll cost reduction activities, studies comparing the effects of payroll cost reduction methods (i.e. cutting pay and downsizing) on work attitudes (e.g. affective commitment and job satisfaction) have been limited. This three-paper dissertation compares the effects of cutting pay and downsizing on work attitudes of remaining employees.

The studies in Paper 1 of this dissertation compare the main effects in this comparison. The results demonstrate that employees whose pay is cut, compared to survivors of downsizing, exhibit less positive pay-related perceptions and work attitudes while they exhibit more positive job security-related perceptions.

The studies in Paper 2 identify trust in management as a moderator in this comparison. When the level of trust in management is low, employees who had their pay cut exhibit lower levels of work attitudes than employees who survived downsizing. When the level of trust in management is high, on the other hand, employees who had their pay cut did not exhibit lower levels of work attitudes than employees who survived downsizing. Moreover, when the level of trust in management is high, employees whose pay is cut experience stronger perceptions of job security than those employees who survive downsizing.

Lastly, the studies in Paper 3 identify sector as a moderator in this comparison. In the private sector, survivors of downsizing exhibited higher levels of work attitudes relative to

employees whose pay was cut. In the public sector, on the other hand, there was no significant difference in the levels of work attitudes between employees whose pay was cut and employees who survived downsizing.

The papers in this dissertation first demonstrate that cutting pay, compared to downsizing, better maintains perceptions of job security but does not as well maintain pay-related perceptions. When work attitudes are examined, the papers overall demonstrate that downsizing better maintains work attitudes than cutting pay. Lastly, the papers also demonstrate that pay cuts can be a more feasible alternative to downsizing in terms of maintaining work attitudes of remaining employees in the public sector and when the level of trust in management is high.

BIOGRAPHICAL SKETCH

Yeong Joon (YJ) Yoon earned his Bachelor of Business Administration degree and Bachelor of Science in Agriculture degree from Seoul National University in 2006. He received his Master of Industrial and Labor Relations degree in 2012 and Master of Science in Industrial and Labor Relations in 2014 from Cornell University. Yeong Joon (YJ) Yoon also has worked as an assistant manager in the Human Resource Management Department at SK Shipping from 2006 to 2010.

ACKNOWLEDGMENTS

I thank God, my family, friends, and colleagues who have made me everything I am today. I hope this research and my future studies help organizations make better decisions in times of hardship.

“This too shall pass” (Solomon).

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

Abbreviation	Description
AC	Affective commitment
BATNA	Best alternative to a negotiated agreement
CFA	Confirmatory factor analysis
CFI	Comparative fit index
DS	Downsizing
HLM	Hierarchical Linear Modeling (also the name of the statistical software made by Scientific Software International, Inc.)
HR	Human resource
HRM	Human resource management
ICC	Intraclass correlation
JSat	Job satisfaction
JSP	Job security perception
NPM	New Public Management
NWS	National Workplace Survey
OLS	Ordinary Least Square
PC	Pay cut
PCF	Psychological contract fulfillment
PCF-JSec	Psychological contract fulfillment in job security
PCF-PL	Psychological contract fulfillment in pay level
PLS	Pay level satisfaction
PSM	Public service motivation
PWB	Psychological well-being
SD or s.d.	Standard deviation
SE	Standard error
SEM	Structural equations modeling
SPSS	Statistical Package for the Social Sciences (also the name of the statistical software made by IBM)
SRMR	Standardized root mean square residual
RMSEA	Root mean square error of approximation
UK	United Kingdom
US	United States
WERS	Workplace Employee Relations Survey
WIS	WageIndicator Survey

PREFACE

This dissertation is original, unpublished, independent work by the author, Y. J. Yoon.

TABLE OF CONTENTS

PAPER 1

PAY CUTS VS. DOWNSIZING: HOW JOB SECURITY- AND PAY LEVEL-RELATED PERCEPTIONS AFFECT THE WORK ATTITUDES OF REMAINING EMPLOYEES

Abstract

Despite the increase in payroll cost reduction activities, studies comparing the effects of payroll cost reduction methods on employee perceptions and work attitudes have been limited. The two studies in this paper compare the effects of two payroll cost reduction methods, cutting pay and downsizing, on job security-related perceptions (i.e. psychological contract fulfillment in job security and job security perception), pay level-related perceptions (i.e., psychological contract fulfillment in pay level and pay level satisfaction) and work attitudes (i.e., affective commitment, job satisfaction, and job-related psychological well-being) of remaining employees. The results demonstrate that employees whose pay is cut, compared to survivors of downsizing, exhibit less positive pay level-related perceptions and work attitudes while they exhibit more positive job security-related perceptions. The results also show that the more positive work attitudes exhibited by survivors of downsizing are, in part, related to the difference in pay level-related perceptions (in favor of survivors of downsizing) being larger than the difference in job security-related perceptions (in favor of employees whose pay is cut).

Keywords: Payroll cost reduction, cutting pay, reducing pay, pay cut, pay reduction, downsizing, layoff, work attitudes, affective commitment, job satisfaction, psychological well-being, pay level satisfaction, job security, job insecurity

Introduction

Employee compensation accounts for the largest single operating cost of most organizations (Gerhart, Rynes, and Fulmer, 2009), and payroll costs (i.e., cost of wages and salaries) occupy 70 percent of the compensation cost (Bureau of Labor Statistics, 2015). With the pressure to reduce costs, not just during economic downturns but almost constantly in today's competitive environment, organizations are often confronted with the agonizing task of reducing payroll costs while keeping business operations flowing smoothly. As management acknowledges the positive relationship between favorable work attitudes (e.g., commitment and job satisfaction) and organizational effectiveness (e.g., Gong, Law, Chang & Xin, 2009; Kim, 2005; Koys, 2001; Ostroff, 1992), maintaining employees' favorable work attitudes while reducing payroll costs has emerged as a priority (Bewley, 1998, 1999).

Previous studies, however, have yet to adequately identify which payroll cost reduction method (i.e., cutting pay or downsizing) is better for maintaining work attitudes of remaining employees. Rather, earlier research tends to examine the effect of a single method in isolation without comparing the consequences of different methods. For example, studies investigating the effect of downsizing on work attitudes of survivors (e.g. Allen, Freeman, Russel, Reizenstein & Rentz, 2001; Brockner et al., 2004; Luthans & Sommer, 1999; Travaglione & Cross, 2006) compare the effect of downsizing conditions with non-downsizing conditions. Similarly, research on cutting pay (e.g. Greenberg, 1990; Lovett, Coyle, Banerjee & Hardebeck, 2008; Smith, 2002) contrasts work attitudes of employees in pay cut conditions with those in non-pay cut conditions. Although these prior studies have made important contributions to our understanding of the effects a single payroll cost reduction method can have on work attitudes, the literature still lacks a theoretical framework that compares the consequences of different methods. Researchers have therefore called for studies comparing the consequences of payroll cost reduction methods both

theoretically and empirically (Datta, Guthrie, Basuil, and Pandey, 2010).

The current study seeks to address this concern in the literature by presenting and testing a theoretical framework that directly compares the effects of cutting pay and downsizing on work attitudes. Adopting this comparative framework can provide both scientific and practical utilities (Corley and Gioa, 2011) to the literature. First, in terms of scientific utility, the comparative framework helps us understand employees' work attitudes and behaviors more clearly than existing theoretical models that examine the effects of cutting pay or downsizing in isolation. This is because employees (and humans in general) form attitudes and behaviors not just based on the consequences of occurrences but also on anticipated consequences of possible alternatives (counterfactual thinking: see Byrne (2005) and Roese & Olson (1995) for reviews of studies on this topic). For example, researchers studying negotiations have acknowledged this psychological process and adopted the framework of best alternatives to a negotiated agreement (BATNA; Fisher and Ury, 1981) to better understand how people form attitudes and reactions towards the negotiated outcomes. An employee whose pay is cut is likely to form an attitude and a reaction by considering the outcomes of downsizing conditions rather than solely by considering the outcome of non-pay cut conditions. This is because it is highly likely that the organization is already in need of payroll cost reduction, so the realistic alternative to an employee whose pay has been cut is the possibility of losing his or her job through the process of downsizing. In a similar vein, a survivor of downsizing may form attitudes and behaviors by also considering the outcomes of pay-cut conditions and not solely by considering the outcomes of non-downsizing conditions. This is because a possible alternative, in addition to surviving the downsizing process, is the condition in which the organization decides to cut pay; although the employee has already "survived" the current downsizing process, his or her future expectations from the organization, in terms of job security and protection, can differ significantly from an employee whose organization has decided to cut pay

while offering job security to its employees.

Second, there is practical utility to this comparative framework, as organizations often need to reduce payroll cost, and managers are forced to choose among different payroll cost reduction methods rather than simply deciding whether to reduce payroll cost or not. This comparative framework can provide organizations with research-based strategic guidance for the decision making process, presenting management with knowledge about the relative advantages and disadvantages of each payroll cost reduction method (i.e., cutting pay or downsizing).

This study, to the best of my knowledge, is the first attempt to establish a theoretical model that compares the effects of cutting pay and downsizing on work attitudes. The study also tests this comparative model by utilizing multiple samples from both a within-subject design experiment and a field survey. The study not only provides the literature with a comparative framework that fosters a better understanding of the effects of payroll cost reduction methods on work attitudes but also helps organizations make better decisions regarding payroll cost reduction under various contexts.

Theoretical Background and Hypotheses

Payroll cost reduction methods

At a given point in time, an organization performs needed tasks by utilizing a certain amount of labor at given pay rates. Therefore, the total payroll cost (i.e., cost of wages and salaries) at a given point in time for an organization is:

$$\text{Total payroll cost} = \sum_{i=1}^{N} \text{Pay rate}_i$$

Pay rate$_i$ denotes the pay rate of *i*th worker and *N* denotes the number of workers that the organization employs. The total payroll cost at a given point in time, thus, can be reduced through utilizing one or both of the following two methods. First, it can be reduced by lowering the

average pay rate of employees utilized (i.e., $\overline{Pay\ rate}$). This can be done through cutting pay rates of all or some employees. Second, the total payroll cost can be reduced by decreasing the number of workers (i.e., *N*) that the organization employs (e.g., through layoffs). In this study, the former method will be labeled as cutting pay (or pay cut) and the latter method will be labeled as downsizing. This classification is in alignment with the potential methods of reducing payroll cost often presented in the media (e.g. Hobson, 2009; Lewin, 2009; Omer, 2008; Rampell. 2008).

Compared objects in this paper

In this paper, the effect of cutting pay on the work attitudes of employees whose pay is cut will be compared to the effect of downsizing on the work attitudes of downsizing survivors. The current research takes a managerial perspective. After a payroll cost reduction measure (cutting pay or downsizing) has been taken, an organization has to perform tasks by utilizing employees who have been affected by the measure (employees whose pay is cut or employees who survived downsizing). The current research, therefore, is interested in examining which method can be less harmful to the work attitudes of employees who remain but are affected by these methods. As a result, this study is less concerned with the effect of downsizing on the work attitudes of employees who are dismissed or the effect of cutting pay on non-pay-reduced employees in an organization that has imposed pay cuts on some of its employees. Thus, hereinafter, attitudes or perceptions of employees will refer to those of the employees whose pay is cut in the case of cutting pay and of survivors in the case of downsizing.

Past studies and the need for establishing a new comparative framework

Past studies examining pay cuts or downsizing in isolation largely rely on psychological contract theory (Rousseau, 1995) to predict the effects of these payroll cost reduction methods on work attitudes. Psychological contract refers to a perceived implicit set of mutual obligations between an employee and organization (Rousseau, 1995). The theory posits that the perception of

a violation of the contract results in employees reciprocating with less favorable work attitudes and effort toward their jobs and organizations (Rousseau & Tijoriwala, 1998). In studies investigating the effect of downsizing on work attitudes, downsizing is often theorized as a violation of the psychological contract because employees expect their contributions to be reciprocated with a stable work environment (Datta et al., 2010). By implementing downsizing, an organization can make survivors question the stability of their jobs or their future relationships with the organization. As a result, the theoretical model of downsizing versus non-downsizing conditions predicts that downsizing negatively affects the work attitudes of survivors. In alignment with this view, studies show that survivors of downsizing, compared to employees of organizations that did not experience downsizing, demonstrate lower levels of job satisfaction (e.g., Allen et al., 2001; Gilson, Hurd & Wagar, 2004; Luthans & Sommer, 1999; Wagar, 1998) and organizational commitment (e.g., Allen et al., 2001; Brockner et al., 2004; Luthans & Sommer, 1999).

Existing compensation research examining work attitudes mostly focuses on pay *increases* (e.g., Ballou & Podgursky, 1993; Folger & Konovsky, 1989; Greene, 1973; Krefting & Mahoney, 1977; Mitra, Gupta & Jenkins, 1997; Shaw, Duffy, Mitra, Lockhart & Bowler, 2003), and only a small amount of research focuses on the prospect of pay *decreases* (e.g., Chambel & Fortuna, 2015; Greenberg, 1990; Lovett et al., 2008). The handful of studies examining the effect of cutting pay on work attitudes shows that cutting pay is also viewed as a breach of the psychological contract. However, the main reason for this violation of the contract differs from that experienced with downsizing. The focus of the violation in the case of cutting pay is in the organization-initiated unilateral reduction in the promised exchange rate of labor (Chambel & Fortuna, 2015; Fiorito, Bozeman, Young & Meurs, 2007) rather than in the disturbance of a stable work environment or future relationship with the organization. Although the main reason for the violation in psychological contract differs from that of downsizing, the theoretical framework of pay cut versus

non-pay cut conditions also predicts that cutting pay negatively affects attitudes and behaviors of employees when the psychological contract is violated. For example, past research shows that cutting pay is negatively related to pay satisfaction (Lovett et al., 2008) and is positively related to employee theft (Greenberg, 1990).

The existing models utilizing psychological contract theory, however, only explain how and why implementing these payroll cost reduction methods (i.e., cutting pay or downsizing) negatively impact work attitudes. These existing models cannot be utilized to explain why an individual may react more or less favorably to one payroll cost reduction method over the other. As a result, our knowledge from past studies of payroll cost reduction methods is limited to the findings that both methods (i.e. cutting pay and downsizing) negatively affect work attitudes.

We need a comparative framework that can predict the relative advantages and disadvantages of each method in order to determine which payroll cost reduction method is more or less ideal for maintaining employee work attitudes. I propose that because employees experience psychological contract breaches for different reasons under conditions of pay cuts and downsizing, these differences can show the relative advantage or disadvantage of one payroll cost reduction method over the other. Individuals may form attitudes and reactions based on their own comparisons of the relative advantages and disadvantages of these two methods, and conclusions about the strength (and also likely the direction) of the effect of cutting pay or downsizing on work attitudes examined in isolation can differ from those under the comparative framework.

With an established comparative framework, we can then extend the model and explore additional moderators. If we know the relative advantages and disadvantages of a payroll cost reduction method, our theorization process can naturally be extended to answering questions related to the contextual factors of *who*, *when* and *where*. In terms of *who*, we can expect that people who value the relative advantage of a certain method more will react more favorably to that method. In

terms of *when* and *where*, people in situations where advantageous outcomes of one method are valued more will react more favorably to that method. Under the existing psychological contract theory, an important moderating factor in maintaining favorable work attitudes is the perceived fairness in the process of the contract violation. As a result, past studies investigating moderators in the relationships between payroll cost reduction methods (one method in isolation) and work attitudes have mostly, and quite limitedly, focused on factors that could affect perceptions of fairness or justice. For example, past studies have focused on moderating factors such as communication (e.g. Greenberg, 1990), perceived control (e.g. Armstrong-Stassen, 1994, Brockner et al., 2004), supervisor support (e.g. Armstrong-Stassen, 1994, Brockner et al., 2004), and organizational trust (e.g. Brockner et al., 1994). Therefore, establishing the comparative framework of cutting pay and downsizing can also help us to broaden our thinking in investigating moderators in the relationships between payroll cost reduction methods and work attitudes.

There are, however, several studies that incorporate both pay cut and downsizing variables with work attitudes as outcomes in their study models (Eilam-Shamir & Yaakobi, 2014; Fiorito et al., 2007; Snorradottir, Vilhjalmsson, Rafnsdottir & Tomasson, 2013). By examining the results of these studies, we may be able to infer the relative effects of payroll cost reduction methods on work attitudes. However, because these studies do not derive a theoretical comparative framework or establish a meaningful statistical comparison between the effects of cutting pay and downsizing on work attitudes, they are limited in informing our understanding of how different payroll cost reduction methods influence work attitudes, if at all. For example, the study by Fiorito and colleagues (2007) examines the effects of eleven human resource (HR) practices (including cutting pay and downsizing), as well as three organizational characteristics, on organizational commitment. However, the main objective of the study was not to compare the effect of cutting pay and downsizing on organizational commitment; therefore, the most we can examine from the study

regarding this topic is the mere difference in the coefficients of cutting pay and downsizing on organizational commitment.

The comparative model

People often form attitudes toward an object by evaluating its expected positive or negative influence on themselves (Eagly & Chaiken, 1993). Therefore, in order to establish the comparative model of the effects of cutting pay and downsizing on work attitudes, we first need to identify the two methods' relative cost and benefit to employees.

As reviewed in the earlier section, cutting pay and downsizing can both be perceived as a violation of the psychological contract (Rousseau, 1995; Rousseau & Tijoriwala, 1998). However, the main reason for the violation differs in these two cases. As a result, the different obligation that an organization has failed to keep through implementing one payroll cost reduction method over the other can be the relative cost of that method to employees. On the flip side, however, the aspect of the psychological contract that an organization has successfully kept by selecting a certain payroll cost reduction method can be the relative benefit of that method to employees.

When payroll cost reduction is implemented through pay cut, an employee can feel that the psychological contract in the promised pay rate is violated (Chambel & Fortuna, 2015; Fiorito et al., 2007). However, compared with surviving the process of downsizing, the employee can feel that the organization has kept the promise to provide a secure job. As a result, the relative cost of cutting pay to an employee is that his or her pay is decreased while the relative benefit is that his or her job is more likely to be stable. When payroll cost reduction is implemented through downsizing, on the other hand, an employee may feel that the psychological contract is violated because the organization has failed to reciprocate his or her effort with a stable job (Datta et al., 2010). However, compared with the case of cutting pay, the employee may feel that the organization has maintained the promised pay rate. As a result, the relative cost of downsizing to

a survivor is that his or her job is less stable while the relative benefit is that his or her pay level has been maintained. Due to these differences in relative benefits and costs and accepting the assumption that a stable work environment and stable pay are valued by employees in general, we can anticipate that cutting pay and downsizing each have relative advantages in maintaining positive perceptions related to job security and pay level, respectively.

Because providing these relative benefits to employees leads to more favorable employee attitudes toward their benefit provider (while failing to do so leads to less favorable attitudes [Eagly & Chaiken, 1993]), we can assume that cutting pay and downsizing each have different advantageous and disadvantageous mechanisms affecting work attitudes. Cutting pay, compared to downsizing, has an advantage in maintaining favorable work attitudes through the mechanism of better preserving employees' perceptions related to job security. However, at the same time, cutting pay also has a disadvantage in maintaining work attitudes through the mechanism of negatively affecting employees' perceptions related to pay level (vice versa for downsizing when compared to cutting pay). Thus I hypothesize as follows.

> ***Hypothesis 1****: Cutting pay, compared to downsizing, has stronger positive indirect relationships with work attitudes through having stronger positive relationships with job security-related perceptions and these perceptions having positive relationships with work attitudes.*
>
> ***Hypothesis 2****: Cutting pay, compared to downsizing, has stronger negative indirect relationships with work attitudes through having stronger negative relationships with pay-related perceptions and these perceptions having positive relationships with work attitudes.*

Ultimately, however, which payroll cost reduction method better maintains positive work attitudes? Theoretically predicting the answer to this question can be difficult because pay cuts

show a relative advantage in maintaining job security-related perceptions while downsizing has a relative advantage in maintaining pay level-related perceptions. The differences in the net effect will depend on the differences in the size of the effects of cutting pay and downsizing on pay level- and job security-related perceptions as well as the differences in the size of the effects of these perceptions on work attitudes (assuming the effects of cutting pay and downsizing on other outcomes that affect work attitudes are not meaningfully different). Therefore, I will not hypothesize the differences in the relative strength of cutting pay and downsizing on work attitudes. This will only be examined empirically in this paper.

Study 1

In this study, the hypotheses are tested by conducting a within-subject design online experiment. In particular, the model in Figure 1A is tested. As shown in Figure 1A, cutting pay, compared to downsizing, is more positively related to psychological contract fulfillment (PCF) in job security. PCF in job security, in turn, is positively related to job security perception and job security perception is positively related to work attitudes (i.e., affective commitment and job satisfaction). At the same time, cutting pay (compared to downsizing) is more negatively related to PCF in pay level. PCF in pay level, in turn, is positively related to pay level satisfaction and pay level satisfaction is positively related to work attitudes (i.e., affective commitment and job satisfaction).

For work attitudes, attitudes toward organization and job are examined in this study. Payroll cost reduction can affect an employee's attitude toward his or her organization, since the organization can be viewed as the initiator of the payroll cost reduction. Moreover, this act can also influence the attitude of the employee toward his or her job, since the job is the main medium linking the employee to his or her organization. First, affective commitment is examined regarding employees' attitudes toward an organization. Affective commitment refers to an

emotional attachment to an organization that the employee is the member of, involved in, or identifies with (Allen & Meyer, 1990; Gong et al., 2009; Mowday, Steers, & Porter, 1979). Affective commitment has been examined intensively in the literature due to its positive relationships with individual-level outcomes (e.g., job performance and organizational citizenship behavior: Meyer, Stanley, Herscovitch & Topolnytsky, 2002) as well as organizational-level outcomes (e.g., organizational performance: Gong et al., 2009). Second, to examine employees' attitudes toward their jobs, job satisfaction has been observed. Job satisfaction refers to an assessment or appraisal of an individual's job or job experiences (Locke, 1976). Job satisfaction also has been examined intensively in the literature due to its significant relationships with important job-related outcomes such as job performance (Judge, Thoresen, Bono & Patton, 2001), organizational citizenship behavior (Organ & Konovsky, 1989), absenteeism (Hackett & Guion, 1985) and turnover (Carsten & Spector, 1987) as well as outcomes at the organizational level (e.g., customer satisfaction: Koys, 2001).

==========
Insert Figure 1A about here
==========

Study 1: Method

Overview and sample

To conduct a within subject design online experiment, I solicited 128[1] subjects from Amazon Mechanical Turk. Subjects were required to be employed (excluding those who were self-employed, students, or owners of an organization), over 18 years of age, and U.S.-based. Subjects were 39.1 percent female, 82.0 percent full-time employed, 58.7 percent with undergraduate or higher degree, with 6.4 years of organizational tenure (SD = 5.6) and averaged 37.9 years old (SD = 10.4). The study took about 10 minutes to complete, and subjects who

[1] *Responses from 200 subjects were originally collected. However, 72 respondents (36.0 percent) did not answer the attention check question correctly and their responses were excluded from the analysis.*

completed the study were paid one dollar.

In the first part of the online experiment, a participant's baseline level of affective commitment (toward his or her organization) and job satisfaction (toward his or her current job) was measured. In the second part of the experiment, a participant was provided with a scenario in which his or her organization has been negatively impacted by the recent recession and currently needed to reduce its payroll cost by 10 percent. In the third part of the experiment, two scenarios were presented showing the payroll cost reduction methods that the organization had implemented to overcome the challenge. The first scenario showed that the organization had reduced 10 percent of its employees to reduce payroll costs while the participant was able to survive the process and was not dismissed (Scenario 1: Downsizing scenario). In the second scenario, the organization had reduced 10 percent of all workers' pay, including the pay of the participant (Scenario 2: Pay cut scenario). After presenting the two scenarios, participant's anticipated levels of PCF in job security and pay level, job security perception, pay level satisfaction, affective commitment, and job satisfaction were measured (separately measured for each scenario). The presentation order of these two scenarios was randomized. In the last part of the experiment, demographic data (e.g., gender and age) were collected and participants were debriefed.

Measures

Affective commitment. Affective commitment was measured by asking to what extent the individual agreed or disagreed (five-point scale) with the following three statements: "AC1: Under this change, I will feel very little loyalty to the organization that I work for" (reverse coded), "AC2: Under this change, I will find that my values and the organization's are very similar", and "AC3: Under this change, I will be proud to be working for this organization". The measure is a shortened and revised version of that by Marsden and colleagues (1993), reflecting the hypothetical nature of the scenarios provided to respondents.

Job satisfaction. Job satisfaction was measured by asking to what extent the individual agreed or disagreed (five-point scale) with the following three statements: "JSat1: Under this change, I will be satisfied with my job", "JSat2: Under this change, I will not like my job" (reverse coded), and "JSat3: Under this change, I will like working here". The measure is a revised version of that by Cammann and colleagues (1983), reflecting the hypothetical nature of the scenarios provided to respondents.

Psychological contract fulfillment (PCF) in job security. PCF in job security was measured by asking to what extent the individual agreed or disagreed (five-point scale) with the following statement: "Under this change, I will feel that the organization has fulfilled the promise that it had committed to provide me with regarding the [following aspect] of my job". The items for the *following aspect* were: being certain of keeping my job (PCF-JSec1), being sure I will always have a job (PCF-JSec2), and being certain my job will last (PCF-JSec3). The question was adopted from the measure by Robinson and Morrison (1995) and has been revised to reflect the hypothetical nature of the scenarios provided to respondents. The job security items were adopted from the Work Values Survey by Cable and Edwards (2004).

Psychological contract fulfillment (PCF) in pay level. PCF in pay level was measured by asking to what extent the individual agreed or disagreed (five-point scale) with the following statement: "Under this change, I will feel that the organization has fulfilled the promise that it had committed to provide me with regarding the [following aspect] of my job". The items for the *following aspect* were: salary level (PCF-PL1), total compensation (PCF-PL2), and the amount of pay (PCF-PL3) (five-point scale). The question was also adopted from the measure by Robinson and Morrison (1995) and has been revised to reflect the hypothetical nature of the scenarios provided to respondents. The pay level items were adopted from the Work Values Survey by Cable and Edwards (2004).

Job security perception. Job security perception was measured by asking to what extent the individual agreed or disagreed (five-point scale) with the following five statements: "JSP1: Under this change, I will believe that I will be able to keep my present job as long as I wish", "JSP2: Under this change, I will be confident that I will be able to work for my organization as long as I wish", "JSP3: Under this change, I will believe that my job will be there as long as I want it", "JSP4: Under this change, I will believe that I am secure in my job", and "JSP5: Under this change, I will believe that my job is not a secure one" (reverse coded). The measure is a shortened and revised version of that by Kraimer and colleagues (2005), reflecting the hypothetical nature of the scenarios provided to respondents.

Pay level satisfaction. Pay level satisfaction was measured by asking to what extent the individual agreed or disagreed (five-point scale) with the following three statements: "PLS1: Under this change, I will be satisfied with my salary", " PLS2: Under this change, I will not be satisfied with the size of my current salary" (reverse coded), and " PLS3: Under this change, I will be satisfied with my overall level of pay". The measure is a shortened and revised version of that by Heneman and Schwab (1985), reflecting the hypothetical nature of the scenarios provided to respondents.

Pay cut (compared to downsizing). Responses provided in the pay cut scenario were coded as 1 and the responses provided in the downsizing scenario were coded as 0.

Control variables. Demographic variables (i.e., age, gender, education level, organizational tenure, work hours and full-time status) and baseline levels of affective commitment and job satisfaction were included as control variables. The relationships of interest that were significant in the model with control variables were also significant and in the same direction in the model without control variables. Therefore, only the results of the model without control variables are reported.

Analysis model

The multi-level structural equation modeling (SEM) was applied to validate the model considering the multiple-itemed measurement structure and the data structure that responses are nested in respondents (i.e., one response for pay cut scenario and another response for downsizing scenario per respondent). Mplus 7.4 (Muthen & Muthen, 2012) was utilized for the analysis.

Study 1: Results

Descriptive statistics

The means, standard deviations, and correlations among the variables are presented in Table 1A. It is notable that the correlations between pay cut (compared to downsizing) and job security-related perceptions are positive (e.g. *r* between pay cut and JSP1 = 0.308, $p < 0.01$) while the correlations between pay cut (compared to downsizing) and pay level-related perceptions are negative (e.g. *r* between pay cut and PLS1 = -0.654, $p < 0.01$). Also notable is the negative correlation between pay cut (compared to downsizing) and job satisfaction variables (e.g. *r* between pay cut and JSat1= -0.257, $p < 0.01$).

==========
Insert Table 1A about here
==========

Model testing

Confirmatory factor analysis (CFA). CFA model treating affective commitment, job satisfaction, job security perception, pay level satisfaction, psychological contract fulfillment in job security, and psychological contract fulfillment in pay level as separate latent factors yielded a good fit to the observed covariance matrix ($\chi^2_{(155)} = 168.733$, $p = 0.213$; SRMR within = 0.031, SRMR between = 0.000; RMSEA = 0.019; CFI = 0.996). In addition, all the factor loadings were significant at the one percent significance level. On the other hand, the one-factor model in which all the variables were loaded in a single factor yielded a poor fit to the observed covariance matrix

($\chi^2_{(170)}$ = 2,336.774, p = 0.000; SRMR within = 0.288, SRMR between = 0.000; RMSEA = 0.223; CFI = 0.292).

Model fit. The hypothesized model yielded (see Figure 1B) acceptable fit to the observed covariance matrix ($\chi^2_{(179)}$ = 204.121, p = 0.096; SRMR within = 0.044, SRMR between = 0.000; RMSEA = 0.023; CFI = 0.993). Moreover, all the paths in the model were significant at the one percent significance level.

==========
Insert Figure 1B about here
==========

Hypothesis 1. Table 1B lists the all indirect effects from pay cut (compared to downsizing) to work attitudes (i.e., affective commitment and job satisfaction). First, the indirect effects from pay cut to work attitudes through job security-related perceptions are all significantly positive (estimate of indirect effect in P1 = 0.162, SE = 0.052, p < 0.01; estimate in P3 = 0.127, SE = 0.040, p < 0.01). Second, in Figure 1B, the paths from pay cut to PCF in job security (estimate = 0.878, SE = 0.123, p < 0.01), from PCF in job security to job security perception (estimate = 0.730, SE = 0.076, p < 0.01), and from job security perception to work attitudes (estimate for affective commitment = 0.252, SE = 0.070, p < 0.01; estimate for job satisfaction = 0.198, SE = 0.053, p < 0.01) are all significantly positive. Together, these results demonstrate that cutting pay, compared to downsizing, has more positive indirect relationships with work attitudes (i.e., affective commitment and job satisfaction) through having more positive relationships with perceptions related to job security (i.e. PCF in job security and job security perception) and these perceptions having positive relationships with work attitudes. Therefore, Hypothesis 1 is supported.

==========
Insert Table 1B about here
==========

Hypothesis 2. First, in Table 1B, the indirect effects from pay cut to work attitudes

through pay level-related perceptions are all significantly negative (estimate of indirect effect in P2 = -0.249, SE = 0.062, $p < 0.01$; estimate in P4 = -0.674, SE = 0.098, $p < 0.01$). Second, in Figure 1B, the path from pay cut to PCF in pay level (estimate = -1.682, SE = 0.121, $p < 0.01$) is significantly negative. Lastly, in the same figure, the paths from PCF in pay level to pay level satisfaction (estimate = 0.852, SE = 0.055, $p < 0.01$) and from pay level satisfaction to work attitudes (estimate for affective commitment = 0.174, SE = 0.040, $p < 0.01$; estimate for job satisfaction = 0.470, SE = 0.051, $p < 0.01$) are all significantly positive. These all together demonstrate that cutting pay, compared to downsizing, has more negative indirect relationships with work attitudes (i.e., affective commitment and job satisfaction) through having more negative relationships with perceptions related to pay level (i.e., PCF in pay level and pay level satisfaction) and these perceptions having positive relationships with work attitudes. Therefore, Hypothesis 2 is supported.

Comparing the direct and indirect effects. In Table 1B, the values of indirect effects through pay level-related perceptions (total indirect effect estimate for affective commitment = -0.249; for job satisfaction = -0.674) are larger than those for indirect effects through job security-related perceptions (total indirect effect estimate for affective commitment = 0.162; for job satisfaction = 0.127). This demonstrates that the negative indirect effect of cutting pay (compared to downsizing) on work attitudes through pay level-related perceptions is stronger than the positive indirect effect of cutting pay (compared to downsizing) on work attitudes through job security-related perceptions.

I also examined the model with only the direct paths between pay cut (compared to downsizing) and work attitudes (i.e., affective commitment and job satisfaction) (not shown in figures or tables). In this model, the path between pay cut (compared to downsizing) and job satisfaction was significantly negative (estimate = -0.405, SE = 0.091, $p < 0.01$), while the path

between pay cut (compared to downsizing) and affective commitment was not significant (estimate = 0.063, SE = 0.057, ns). This shows that, overall, participants showed higher levels of job satisfaction in the downsizing scenario (where they survived the process of downsizing) than under the pay cut scenario.

Study 1: Discussion

The findings in Study 1 first indicate that cutting pay, compared to downsizing, has an advantage in maintaining work attitudes (i.e., affective commitment and job satisfaction) through better maintaining job security-related perceptions (i.e., PCF in job security). However, the findings also indicate that downsizing, compared to cutting pay, has an advantage in maintaining work attitudes through better maintaining pay level-related perceptions (i.e., PCF in pay level and pay level satisfaction). When the direct effects of these two payroll cost reduction methods on work attitudes are compared, results indicate that downsizing better maintains job satisfaction than pay cuts.

Why then does downsizing, compared to cutting pay, better maintain job satisfaction? The analysis implies that the relative advantage of cutting pay over downsizing (i.e., better maintaining job security-related perceptions) is not strong enough to negate the relative disadvantage (i.e., less well maintaining pay level-related perceptions). The results show that the indirect effect of cutting pay (compared to downsizing) on work attitudes through job security-related perceptions is weaker (i.e., the absolute value is smaller) than that through pay level-related perceptions. More detailed examination shows that these differences in indirect effects are derived mostly from the difference between the effects of payroll cost reduction methods (pay cut vs. downsizing) on PCF in job security (estimate = 0.878, SE=0.123, $p < 0.01$; See Figure 1B) and in pay level (estimate = -1.682, SE=0.121, $p < 0.01$; See Figure 1B). In other words, it appears that participants strongly perceive pay cuts as a breach of the psychological contract in pay level while

they less strongly perceive downsizing as a breach of psychological contract in job security. One possible reason for this difference is that the participants have "survived" the process of downsizing and perceptions of a breach may not be as strong in this case.

Although the study illustrates some important findings, two important methodological limitations should be acknowledged. First, the current study only utilizes the case of 10 percent in reduction in pay and workforce. The result showing a larger effect size difference between payroll cost reduction methods (cutting pay vs. downsizing) on pay level-related perceptions than on job security related perceptions may be driven by the fact that a 10 percent pay reduction is above the critical point that employees can tolerate. This may have had a strong negative effect on participants' pay level-related perceptions under the pay cut scenario, while the reduction percentage in the case of downsizing does not significantly affect survivors' job security-related perceptions. However, in previous studies examining pay cut percentages (Gartrell & Paille, 1997; Greenberg, 1989, 1990; Lee & Rupp, 2007; Lovett, Coyle, Banerjee & Hardebeck, 2008; Smith, 2002), a 10 percent reduction in pay is not considered extreme. Nonetheless, future studies should utilize pay cut and downsizing cases with various reduction magnitudes to explore whether a critical point exists where employees react more favorably to one method over the other.

Second, and more importantly, the study only examines "expected" perceptions and attitudes of participants in hypothetical situations. The results may therefore not be as generalizable to employee populations in real work settings. To address this concern, I conducted a second study to re-test the hypotheses using a sample of employees in a real work setting.

Study 2

In this study, the hypotheses are tested by analyzing a secondary dataset in the United Kingdom. In particular, the model in Figure 1C is tested. The empirical model in Study 2 is similar to the model in Study 1 with the following two differences. First, the constructs of PCF in

job security and in pay level are omitted from the model because the related variables were not available in the dataset. Second, for attitudes of employees toward their jobs, job-related psychological well-being (PWB) was utilized instead of job satisfaction, because the job satisfaction variables were not available in the dataset.

==========
Insert Figure 1C about here
==========

Job-related PWB can be referred as a person's self-described happiness that reflects the person's overall experience in his or her job (Diener, 1984; Danna and Griffin, 1999). The construct, along with job satisfaction, has also received interest in the management literature with the premise that "happy" workers demonstrate more positive levels of job-related performance and behaviors than "unhappy" workers (happy-productive worker hypothesis; Wright and Cropanzano, 2000). In alignment with the happy-productive worker hypothesis, studies demonstrate a positive relationship between PWB of employees and their job performance (e.g. Wright & Bonett, 1997; Wright, Bonett & Sweeney, 1993; Wright and Cropanzano, 2000).

Despite the differences noted above, Study 2 also tests the hypotheses that cutting pay, compared to downsizing, has a stronger positive indirect relationships with work attitudes (i.e., affective commitment and job-related PWB) through having stronger positive relationships with job security-related perceptions (i.e., job security perception) while it has a stronger negative indirect relationships with work attitudes through having stronger negative relationships with pay level-related perceptions (i.e., pay level satisfaction).

Study 2: Method

Overview and sample

The analysis uses the 2011 Workplace Employee Relations Survey (WERS) in the United Kingdom. WERS contains comprehensive matched workplace-employee information including

business environment, human resource management systems, and workforce characteristics of participating workplaces, as well as various perceptions of their employees. The survey is intended to represent the economy of the United Kingdom, and the stratified sampling method was utilized for sample selection. Excluding any missing data, the final sample for the analysis consisted of 15,366 employees in 1,866 workplaces.

Measures

Affective commitment. The affective commitment of a given employee was measured by asking an employee to what extent the individual agreed or disagreed (five-point scale) with the following three statements: "I share many of the values of my organization", "I feel loyal to my organization", and "I am proud to tell people who I work for" ($\alpha = 0.851$). The measure is similar to (but shorter than) the measure by Mowday, Steers and Porter (1979).

Job-related psychological well-being (PWB). The job-related PWB of a given employee was measured with a six-item measure. The measure is similar to (but shorter than) the measure of job-related affective well-being measure by Warr (1990). An employee was asked how often his or her job made him or her feel tense, depressed, worried, gloomy, uneasy, and miserable (five-point scale) ($\alpha = 0.910$). Responses were reverse coded. Therefore, higher level of measurement score reflects higher level of PWB.

Job security perception. The job security perception of a given employee was measured by asking an employee to what extent the individual agreed or disagreed (five-point scale) with the following statement: "I feel my job is secure in this workplace." Since the measure is single-itemed, the reliability of this measure could not be tested. This limitation is acknowledged in this study.

Pay level satisfaction. The pay level satisfaction of a given employee was measured by asking the following question: "How satisfied are you with the following aspect of your job: The

amount of pay you receive?" (five-point scale). Although this was a single-item measure, a study by Nagy (2002) demonstrates the possibility of utilizing a single-item measure for pay level satisfaction. The study shows that the correlation between a multiple-item measure of pay satisfaction in the Job Descriptive Index (Smith, Kendall & Hulin, 1969) and single-item measure of pay satisfaction (which in this study measures the satisfaction with the "amount" of pay) is significant and is the strongest among all the facets of job satisfaction in the study ($r = 0.72$, $p < 0.01$).

Pay cut. 2011 WERS asked the following questions to employees. "Did any of the following happen to you as a result of the most recent recession[2], whilst working at this workplace?" The answer choices given to employees were:

1) My work was reorganized.
2) I was moved to another job.
3) My wages were frozen or cut.
4) My non-wage benefits (e.g. vehicles or meals) were reduced.
5) My contracted working hours were reduced.
6) Access to paid overtime was restricted.
7) I was required to take unpaid leave.
8) Access to training was restricted.
9) None of the above.
10) I was not working at this place during the recession.[3]

Employees were able to select multiple items from the answer choices. An employee who selected the answer choice 3) was coded as an employee whose pay was cut.

---

[2] *Although no specific time period was provided in the survey, given the time when the survey was completed, it is highly likely that employees understood the "most recent recession" to refer to the global financial crisis that started in the second half of 2008 when Lehman Brothers collapsed (Economist, 2013),*

[3] *Employees who indicated that they didn't work for the organization during the recession were excluded from the analysis (about 10.3 percent of the sample).*

The measure of pay cut (i.e., the answer choice 3) in this study also encompasses a situation in which an employee's pay is frozen. Therefore, the measure also reflects cases of "real" pay cuts as well as "nominal" pay cuts[4]. The outcomes of "real" pay cuts, however, can be expected to be similar to (but may be weaker than) those resulting from "nominal" pay cuts. Studies show that workers expect their pay to increase at least at the rate of inflation (e.g., Bewley, 1999; Loewenstein & Sicherman, 1991) and "real" pay cuts can lead to the perception that an individual is now not paid at the level he or she rightfully deserves. Press releases regarding pay raises often compare the raise to the inflation rate and evaluate whether the level of pay raise is adequate or not (e.g. Brecht, 2014; Strauss, 2014), providing additional evidence that the “real” wage level is an important psychological reference point. Additionally, a study by Smith (2002) has also shown that both "nominal" pay reductions and pay freezes (which in this case was also a "real" pay cut due to positive inflation rates in the relevant area during the data collection period) are negatively associated with pay satisfaction and overall job satisfaction. In this study, there were no significant differences between the sizes of coefficients of pay cuts and pay freezes on the outcomes (i.e., pay satisfaction and overall job satisfaction).

It is important to note that employees whose work hours are reduced, but in fact whose pay "rate" is not reduced, may also have selected the answer choice 3) in the survey. In the case of reduced work hours, individuals may perceive a reduction in their total pay from their contract. However, because the theoretical framework for cutting pay in this study relies on the reduction of pay "rate", perceptions of work hour reduction as a pay cut should be excluded. Therefore, work hour reduction was included as a control variable in the analysis model to estimate the effect of

---

[4] *The data from the Office of National Statistics (http://www.ons.gov.uk) in the United Kingdom (where the sample for this study is utilized) shows that the inflation rate in the United Kingdom was 3.6, 2.2, 3.3 and 4.5 percent in 2008, 2009, 2010 and 2011, respectively. Therefore, the case of freeze in pay can be viewed as reduction in "real" pay.*

cutting pay on outcomes of interest independent of the effect of work hour reduction. Employees who selected the answer choice of 5), 6) and/or 7) were coded as those whose work hours were reduced.

Downsizing. HR managers of the participating organizations were asked, "Which, if any, of these actions were taken by your workplace in response to the recent recession?" Some of the answer choices included "Compulsory redundancies", "Voluntary redundancies", "Reduction in training expenditure" and "Change in the organization of work". Employees in organizations where HR managers selected the answer choice of "Compulsory redundancies" and/or "Voluntary redundancies" were coded as the survivors of downsizing.

Neither pay cut nor downsizing. An employee whose pay was not cut and who was not a survivor of downsizing was included in this group.

Both pay cut and downsizing. An employee whose pay was cut and who was also a survivor of downsizing was included into this group. This employee was not again coded as either an employee whose pay is cut or a survivor of downsizing. Therefore, the four conditions (i.e., *pay cut*, *downsizing*, *neither pay cut nor downsizing* and *both pay cut and downsizing*) are mutually exclusive.

Control variables. The control variables were chosen based on past studies examining affective commitment (e.g., Mathieu & Zajac, 1990) and PWB (e.g., Danna & Griffin, 1999), which are the main dependent variables in this study. The details of the control variables are in Appendix 1A. Personal (gender, age, marital status, workplace tenure, education level, pay level, temporary status, union member and work hours), job (occupation and autonomy) and workplace (industry and workplace size) characteristics that may affect either or both payroll cost reduction or/and work attitudes were included as controls.

Other than the work hour reduction variable discussed earlier, two important control

variables that should be discussed further are pay level and workplace size. Although the survey does not report the amount of pay and number of employees reduced, it reports the weekly amount of pay that an employee receives from the organization and the number of employees that the workplace had hired at the time of the survey (2011, after the event of cutting pay or downsizing). The weekly pay amount of an employee is controlled because the level of pay that an individual receives after his or her pay is cut may influence the relationship between cutting pay and various outcomes of this study. For example, if an individual still receives a very high level of pay after his or her pay is cut, the event of cutting pay may only have a small effect on the individual's perceptions and attitudes. Similarly, workplace size can be an important factor in the case of downsizing, as the act of downsizing may be more or less salient depending on the size of a workplace. For example, employees in small workplaces, compared with those in larger workplaces, may develop stronger personal relationships with their coworkers; employees who witness a coworker's job-loss may develop more negative feelings toward both their job and the organization. On the other hand, employees in large workplaces may not even realize that downsizing has occurred if the subjects of downsizing are distant in terms of job functions or physical distance.

Analysis model

Hierarchical linear modeling (HLM) was applied to analyze the data, given the multi-leveled structure of the data (i.e., employees nested in workplaces) (Hofmann, 1997). I applied the two-level HLM analysis. The first level of analysis represents the individual level and models how the individual level variables (e.g., payroll cost reduction methods, gender, age, pay level, etc.) affect the outcomes of interest. The second level of analysis represents the organizational level and models how the organizational level variables (e.g., organization size, age, industry, etc.) affect the outcomes of interest. I calculated ICC(1) values of the final outcome variables to examine

non-independence in the data. ICC(1) values were 0.165 for affective commitment and 0.079 for job-related PWB, suggesting the need for adopting a multi-level (e.g., HLM) method to analyze the data (Bliese, 2000; Krull & McKinnon, 2001). HLM7 (Raudenbush, Byrk, Cheong, Congdon & du Toit, 2011) was used for the analysis, and the equations for the analysis comparing the effects of cutting pay and downsizing on outcomes of interest are as follows.

(Level 1 Equation)

$$Outcome_{ij} = \beta_{0j} + \beta_1 * Pay\ cut_{ij} + \beta_2 * Both\ pay\ cut\ and\ downsizing_{ij} + \beta_3 * Neither\ pay\ cut\ nor\ downsizing_{ij} + \beta_k * Level\text{-}1\ controls_{ij} + \varepsilon$$

(Level 2 Equations)

$$\beta_{0j} = \gamma_{00} + \gamma_{0m} * Level\text{-}2\ controls_j + \mu_{0j} \quad / \quad \beta_1 = \gamma_{10} \quad / \quad \beta_2 = \gamma_{20} \quad / \quad \beta_3 = \gamma_{30} \quad / \quad \beta_k = \gamma_{k0}$$

In the Level 1 Equation, *Pay cut*, *Both pay cut and downsizing*, and *Neither pay cut nor downsizing* are dummy variables denoting 1 as employees categorized into the variable name groups and 0 as otherwise. Therefore, the base for comparison in this equation is the employees in the *Downsizing* group (i.e., survivors of downsizing) and β_1 denotes the difference of the average level of an outcome (i.e., job security perception, pay level satisfaction, affective commitment or job-related PWB) between employees whose pay is cut and those who survived downsizing.

For estimating indirect effects under the multi-leveled data structure, I followed the procedures recommended by Mathieu and Taylor (2007) and Krull and McKinnon (1999, 2001). For more intuitive comparison of the results, outcome variables (i.e., job security perception, pay level satisfaction, affective commitment and job-related PWB) were standardized.

Study 2: Results

Descriptive statistics

The means, standard deviations, and correlations among the variables are presented in

Table 1C. Notable findings include the mean values of the pay cut variable (0.187), downsizing variable (0.203) and both pay cut and downsizing variable (0.190). This indicates that 18.7 percent of the workers have experienced a pay cut (including pay freeze) alone, 20.3 percent of the workers have experienced (i.e., survived) downsizing alone, and 19.0 percent of the workers have experienced both a pay cut (including pay freeze) and downsizing during the recent recession. Altogether, the statistics show that 58.0 percent of the workers in the sample have responded that they either have been the subjects of pay cuts (including pay freeze or "real" pay cut) and/or survived the event of downsizing during the recent recession. Although the measure also includes cases of pay freeze, it can be inferred from the statistics that payroll cost reduction was a relatively common phenomenon in the United Kingdom during the recent recession. Also notable are the correlations between payroll cost reduction options and some individual and workplace characteristics. For example, there is a positive correlation between union member and pay cut ($r = 0.082$, $p < 0.01$) but a negative correlation between union member and downsizing ($r = -0.027$, $p < 0.01$). Interesting differences were also found in the case of workplace size (r between workplace size and pay cut = -0.056, $p < 0.01$; r between workplace size and downsizing = 0.134, $p < 0.01$). This may indicate that certain characteristics of individuals or workplaces lead to more or less likelihood of adopting pay cuts and/or downsizing, which could be examined in future studies. Finally, the relationships between the two methods and outcomes of interest in this study are also notable (r between pay cut and affective commitment = -0.048, $p < 0.01$; r between downsizing and affective commitment = 0.013, ns; r between pay cut and job-related PWB = -0.069, $p < 0.01$; r between downsizing and job-related PWB = 0.031, $p < 0.01$; r between pay cut and job security perception = -0.030, $p < 0.01$; r between downsizing and job security perception= -0.035, $p < 0.01$; r between pay cut and pay level satisfaction = -0.115, $p < 0.01$; r between downsizing and pay level satisfaction = 0.075, $p < 0.01$).

==========
Insert Table 1C about here
==========

Hypothesis testing

Hypothesis 1. First, in Model 2 of Table 1D, the HLM coefficient for pay cut (compared to downsizing) on job security perception is significantly positive (estimate = 0.114, SE = 0.032, $p < 0.01$). Next, in Models 7 and 10 of the same table, the HLM coefficients for job security perception on work attitudes are all significantly positive (estimate for affective commitment = 0.226, SE = 0.009, $p < 0.01$; estimate for job-related PWB = 0.241, SE = 0.009, $p < 0.01$). Lastly, in paths P1 and P2 of Table 1E, the indirect relationships between pay cuts and work attitudes through job security perception are all significantly positive (estimate for P1= 0.026, SE = 0.009, $p <0.01$; estimate for P2 = 0.027, SE = 0.008, $p <0.01$). The results demonstrate that cutting pay, compared to downsizing, has more positive indirect relationships with work attitudes (i.e., affective commitment and job-related PWB) through having a more positive relationship with job security perception and job security perception having positive relationships with work attitudes. Therefore, Hypothesis 1 is supported.

Hypothesis 2. First, in Model 4 of Table 1D, the HLM coefficient for pay cut (compared to downsizing) on pay level satisfaction is significantly negative (estimate = -0.309, SE = 0.027, $p < 0.01$). Next, in Models 7 and 10 of the same table, the HLM coefficients for pay level satisfaction on work attitudes are all significantly positive (estimate for affective commitment = 0.214, SE = 0.008, $p < 0.01$; estimate for job-related PWB = 0.197, SE = 0.009, $p < 0.01$). Lastly, in paths P3 and P4 of Table 1E, the indirect relationships between pay cuts and work attitudes through pay level satisfaction are all significantly negative (estimate for P3 = -0.066, SE = 0.006, $p <0.01$; estimate for P4 = -0.061, SE = 0.006, $p <0.01$). The results demonstrate that cutting pay (compared to downsizing) has more negative indirect relationships with work attitudes (i.e., affective

commitment and job-related PWB) through having a more negative relationship with pay level satisfaction and pay level satisfaction having positive relationships with work attitudes. Therefore, Hypothesis 2 is supported.

==========
Insert Table 1D and 1E about here
==========

Comparing the direct and indirect effects. The estimated relationships between payroll cost reduction methods and affective commitment are shown in Model 6 of Table 1D. The coefficient for pay cut (compared to downsizing) on affective commitment is significantly negative (estimate = -0.120, SE = 0.029, $p < 0.01$). Therefore, the average level of affective commitment of employees whose pay is cut is lower than that of downsizing survivors.

Next, the estimated relationships between payroll cost reduction methods and job-related PWB are shown in Model 9 of Table 1D. The coefficient for pay cut (compared to downsizing) on job-related PWB is significantly negative (estimate = -0.137, SE = 0.029, $p < 0.01$). Therefore, the average level of job-related PWB of employees whose pay is cut is lower than that of downsizing survivors.

The results of the comparison between the effects of cutting pay and downsizing on work attitudes (i.e. affective commitment and job-related PWB) are summarized in Figures 1D and 1E. A similar pattern observed in Study 1 is observed in this study; the absolute values for indirect effects through pay level-related perceptions (i.e., pay level satisfaction) (indirect effect estimate for affective commitment = -0.066, Figure 1D; indirect effect estimate for job-related PWB= -0.061, Figure 1E) are larger than those for indirect effects through job security-related perceptions (i.e., job security perception) (indirect effect estimate for affective commitment = 0.026, Figure 1D; indirect effect estimate for job satisfaction = 0.027, Figure 1E). Examining the results more closely, I observed another pattern similar to Study 1; the differences in indirect effects appear to be derived

mostly from the difference between the effects of payroll cost reduction methods (pay cut vs. downsizing) on job security- and on pay level-related perceptions. When comparing indirect effects on affective commitment (Figure 1D), the difference (in absolute value) between the effects of job security perception (estimate = 0.226, SE = 0.009, $p < 0.01$) and pay level satisfaction (estimate = 0.214, SE = 0.008, $p < 0.01$) on affective commitment is not relatively large. However, the difference between the effects of pay cut (compared to downsizing) on job security perception (estimate = 0.114, SE = 0.032, $p < 0.01$) and on pay level satisfaction (estimate = -0.309, SE = 0.027, $p < 0.01$) is relatively large. When comparing indirect effects on job-related PWB (Figure 1E), the same pattern is observed. The difference (in absolute value) between the effects of job security perception (estimate = 0.241, SE = 0.009, $p < 0.01$) and pay level satisfaction (estimate = 0.197, SE = 0.009, $p < 0.01$) on job-related PWB is not relatively large; however, the difference between the effects of pay cut (compared to downsizing) on job security perception (estimate = 0.114, SE = 0.032, $p < 0.01$) and on pay level satisfaction (estimate = -0.309, SE = 0.027, $p < 0.01$) is relatively large.

==========
Insert Figure 1D and 1E about here
==========

Study 2: Discussion

If causal inferences can be made from the results, the findings in Study 2 first indicate that downsizing, compared to cutting pay, has an advantage of maintaining favorable work attitudes (i.e., affective commitment and job-related PWB) through better maintaining pay level satisfaction. The findings also indicate that cutting pay, compared to downsizing, has an advantage of maintaining work attitudes through better maintaining job security perception. However, when the direct effects of these two payroll cost reduction methods on work attitudes are compared, results indicate that downsizing better maintains work attitudes than cutting pay.

Like in Study 1, the results in this study also indicate that the relative advantage of cutting pay over downsizing (i.e., better maintaining job security-related perceptions) is not strong enough to negate the relative disadvantage (i.e., less well maintaining pay level-related perceptions). The results show that the indirect effect of cutting pay (compared to downsizing) on work attitudes through job security perception is weaker (i.e. the absolute value is smaller) than that through pay level satisfaction. Further examination shows that these differences in indirect effects are derived mostly from the difference between the effects of payroll cost reduction methods (pay cuts vs. downsizing) on job security perception and on pay level satisfaction. The findings in this study are in alignment with the earlier findings in Study 1. With the additional results, we can be more confident that the findings are due to the hypothesized relationships and not to random chance.

Three important methodological limitations of Study 2 should be acknowledged. First, the conclusions made in this study should be carefully applied given the use of cross-sectional data. There is a possibility of reverse causality in the hypothesized relationships. For example, employees who are high on commitment may also be high on performance and thus more likely to be the survivors of downsizing than to be the victims of pay cut. However, the problem of reverse causality is less likely due to the indirect mechanisms demonstrated in this study. Nonetheless, future studies might utilize panel data or qualitative methods to make stronger causal arguments about the effects of cutting pay and downsizing on outcomes of interest.

Second, there may be issues regarding omitted variable bias. Although the dataset includes a number of variables that affect work attitudes and other important variables in the study, it does not include all. For example, while I was able to control for pay level and workplace size after the event of cutting pay and downsizing, I was not able control for the amount of pay or number of employees that were reduced during the event. Future studies should further examine the effect of these additional variables on the hypothesized relationships.

Finally, there are issues related to measurements. As discussed previously, the measure of pay cut does not perfectly reflect the construct as it includes cases where pay was frozen. Additionally, the reliability of the single-items measures of job security perception and pay level satisfaction could not be tested. Future work would benefit from additional better measures to estimate relationships more precisely. Data on pay cuts are extremely difficult to obtain (Lee & Rupp, 2007), and researchers may want to establish a survey that is specifically intended to investigate the phenomenon of cutting pay versus downsizing to overcome these difficulties.

The results of this study, however, replicate those of Study 1, which reduces concerns about the aforementioned limitations to some extent. Study 1 utilizes a within-subjects experiment, which prevents the problems of reverse causality and omitted variable bias. Moreover, Study 1 also utilizes multiple-item measures that were validated. Although the limitations of each study should be acknowledged, we can be confident in the results; using different methodologies with their own advantages and disadvantages, the studies demonstrate the same patterns of relationships between the variables of interest.

General Discussion

Theoretical implications

The studies in this paper establish a comparative model of the effects of payroll cost reduction methods (cutting pay vs. downsizing) on work attitudes. The results reported offer some important implications. First, the comparative model provides us with knowledge of the relative advantages and disadvantages of cutting pay and downsizing for maintaining favorable work attitudes and employee perceptions. Specifically, the model shows that cutting pay, when compared to downsizing, is more advantageous for maintaining job security-related perceptions but also is not advantageous for maintaining pay level-related perceptions (and vice versa).

Second, the results provide us with the knowledge that, despite the advantages and

disadvantages of each payroll cost reduction method, downsizing is less negatively related to work attitudes (i.e., affective commitment, job satisfaction and job-related PWB) than pay cuts. A closer examination of the comparative model reveals that this difference is in part due to the weaker positive indirect effect of cutting pay (compared with downsizing) on work attitudes through job security-related perceptions (i.e., PCF in job security and job security perception) and the stronger negative indirect effect of cutting pay (compared with downsizing) on work attitudes through pay level-related perceptions (i.e. PCF in pay level and pay level satisfaction). Further analysis indicated that the maintenance of job security-related perceptions by cutting pay is weaker than the maintenance of pay level-related perceptions by downsizing.

These implications reveal an important question that should be addressed in future studies: Why is the effect of cutting pay (compared to downsizing) on job security perception not as strong as the effect on pay level satisfaction? One plausible explanation is that employees also perceive pay cutting as a cue that the organization's performance is at risk and that its future is uncertain. As in the case of downsizing, cutting pay might alter an employee's attitude toward job security such that they perceive their relationship with the organization as less stable than in the past. As a result, the relative positive effect of cutting pay (vs. downsizing) on job security perception might be mitigated. Employees whose pay is cut may not perceive job security as a strong relative reward compared to what survivors of downsizing receive (i.e., maintaining pay level).

It is also possible that job security is only meaningful in situations of high instrumentality (Vroom, 1964) in receiving this reward (i.e., secure job). Instrumentality refers to the perception that an outcome will lead to the promised reward (Vroom, 1964). In the case of downsizing, survivors receive their relative reward (i.e., maintaining pay level) instantly, and instrumentality is less of a concern in this case. However, in the case of cutting pay, the relative reward that employees receive (i.e., job security) is deferred, in that some time and trust is needed for the

reward to be realized. For example, if employees feel that cutting pay is only the beginning of the process of reducing costs and that their job might be in danger in the near future, the perceived instrumentality level in receiving the reward (i.e., job security) can be low. As a result, instrumentality can be an important factor when cutting pay.

Future studies, therefore, should explore why pay cuts fail to maintain job security perceptions as well as downsizing maintains pay level satisfaction. Future work should also examine contextual factors that amplify the relative advantage of pay cuts in maintaining job security perception. For example, if the instrumentality in receiving the reward (i.e., secure job) for employees whose pay is cut is an important factor, maintaining a high level of trust between employees and the organization can be a key factor in successfully managing work attitudes when pay needs to be cut.

Practical implications

The conclusions of these studies make contributions to policy and practice. First, the results indicate that downsizing, compared with cutting pay, maintains more favorable work attitudes (i.e., affective commitment, job satisfaction and job-related PWB) and pay level-related perceptions (i.e., PCF in pay level and pay level satisfaction). As a result, if maintaining favorable work attitudes and fostering positive pay level-related perceptions are top priorities and sources of competitive advantage for businesses, then organizations in need of reducing payroll costs may elect to avoid pay cuts and opt for downsizing instead. Overall, the results confirm the management concerns that cutting pay may damage work attitudes more than downsizing (Bewley, 1998, 1999).

On the other hand, the results indicate that cutting pay, compared to downsizing, better maintains positive job security-related perceptions (i.e. PCF in job security and job security perception). As a result, if it is important for organizations to maintain employees' positive job

security-related perceptions, then organizations needing to reduce payroll costs may elect to avoid downsizing and implement pay cuts. However, the findings also indicate that the maintenance of job security-related perceptions when cutting pay is not as strong as the superior maintenance of pay level-related perception following downsizing. For cutting pay to be a feasible alternative to downsizing in terms of maintaining work attitudes, therefore, organizations implementing pay cuts may want to emphasize to employees that this measure will offer better job security than that achieved by downsizing and thus maximize the relative advantage of cutting pay.

Limitations and future studies

Although the paper provides important implications, some overall limitations should be acknowledged. Because the studies in this paper have drawn samples from the United States (US, Study 1) and the United Kingdom (UK, Study 2), generalizing the results beyond the cultures and economies of these two countries impels revalidation. For example, in coordinated market economies, where the labor market is characterized by less flexibility (i.e., more difficulties in laying-off employees due to stronger labor protection), more use of rewards based on seniority, and elevated focus on the development of firm-specific skills (Hall & Soskice, 2001), employees may prefer to maintain a long-term relationship with organizations and thus be more willing to accept pay cuts. Another factor might be the culture regarding power distance. Employees in high power distance cultures may also prefer to maintain a long-term relationship with organizations due to the high returns associated with seniority in this culture (e.g., Huang & Van de Viert, 2003; Maertz, Stevens & Campion, 2003; Tosi & Greckhamer, 2004) and can also be more willing to accept pay cuts. Considering that the US and the UK are often classified as liberal market economies (Colvin & Darbishire, 2013; Hall & Soskice, 2001; Holman, Frenkel, Sorensen, & Wood, 2009) and low-power distance cultures (Hofstede, 1980), the results here in favor of downsizing may be weaker in samples from other cultures and economies. Therefore, future studies should

incorporate these contextual factors into the comparison model.

Second, there may be concerns of common method bias (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) due to the single data source used for both studies. The estimated relationships between payroll cost reduction methods and employee perceptions/attitudes in both studies may be stronger than the relationships we would observe otherwise. However, the main objective of this study was to "compare" the relative differences in the effects of payroll cost reduction methods on the outcomes rather than to "estimate" the effects, so this limitation may be less of a concern.

Lastly, and most importantly, the results of this study do not necessarily imply that downsizing is a "better" method than cutting pay. The current study only examines the effects of cutting pay and downsizing on work attitudes, especially in terms of maintaining affective commitment, job satisfaction, and job-related PWB. The study does not examine and compare the effects of payroll cost reduction methods on other important aspects of organizational management, such as attracting talent, maintaining production capacity, and gaining legitimacy from society. Therefore, studies examining and comparing the effects of payroll cost reduction methods on these factors should be conducted to reach a more comprehensive conclusion.

Conclusion

Despite the limitations, the current research offers theoretical and practical insights for comparing the effects of payroll cost reduction methods on work attitudes. The research also utilizes multiple research methods (experiment and secondary data analysis) with different methodological advantages and disadvantages. The study provides a partial answer to the question "Which payroll cost reduction method is more effective and why?" and may better fulfill the practical needs of management than evidence showing that payroll cost reduction methods in general have negative consequence. Understanding which payroll cost reduction method is more or less effective is important, as these methods both significantly affect the labor force, as well as

organizations and the societies they serve.

REFERENCES (PAPER 1)

Allen, T. D., Freeman, D. M., Russell, J. E., Reizenstein, R. C., & Rentz, J. O. 2001. Survivor reactions to organizational downsizing: Does time ease the pain?. ***Journal of Occupational and Organizational Psychology***, 74: 145−164.

Allen, N. J. and Meyer, J. P. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. ***Journal of Occupational Psychology***, 63:1–18.

Armstrong-Stassen, M. 1994. Coping with transition: A study of layoff survivors. ***Journal of Organizational Behavior***, 15(7): 597−621.

Ballou, D., & Podgursky, M. 1993. Teachers' attitudes toward merit pay: Examining conventional wisdom. ***Industrial and Labor Relations Review***, 47(1): 50−61.

Bewley, T. F. 1998. Why not cut pay? ***European Economic Review***, 42: 459−490.

Bewley, T. F. 1999. ***Why wages don't fall during a recession***. Boston: Harvard University Press.

Bliese, P. D. 2000. Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), ***Multilevel theory, research, and methods in organizations***, 349−381. San Francisco: Jossey-Bass.

Brecht, K. (2014, December 30). After five years of recovery, US workers can expect to see raises in 2015. ***The Guardian***. Retrieved April 27, 2015, from http://www.theguardian.com/money/2014/dec/30/us-workers-salary-raises-2015.

Brockner, J., Konovsky, M., Cooper-Schnieder, R., Folger, R., Martin, R., & Bies, R. J. 1994. Interactive effects of procedural justice and outcome negativity on victims and survivors of job loss. ***Academy of Management Journal***, 37: 397−409.

Brockner, J., Spreitzer, G., Mishra, A., Hochwarter, W., Pepper, L., & Weinberg, J. 2004. Perceived control as an antidote to the negative effects of layoffs on survivors' organizational commitment and job performance. ***Administrative Science Quarterly***, 49: 76−100.

Bureau of Labor Statistics. (2015, March 11). Employer costs for employee compensation: December 2014. ***Economic News Release***. Retrieved April 27, 2015, from http://www.bls.gov/news.release/ecec.nr0.htm.

Byrne, R. M. J. 2005. ***The rational imagination***. Cambridge, MA: MIT Press.

Cable, D. M., & Edwards, J. R. 2004. Complementary and supplementary fit: A theoretical and empirical integration. ***Journal of Applied Psychology***, 89(5): 822–834.

Cammann, C., Fichman, M., Jenkins,D., & Klesh, J. 1983. Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis & C. Cammann (Eds.), ***Assessing organizational change: A guide to methods, measures and practices***, 71−138. New York: John Wiley.

Carsten, J. M. and Spector, P. E. 1987. Unemployment, job satisfaction, and employee turnover: A meta-analytic test of the Muchinsky model. ***Journal of Applied Psychology***, 72: 374–381.

Chambel, M. J., & Fortuna, R. 2015. Wage reduction of Portuguese civil servants and their attitudes: The psychological contract perspective. ***The International Journal of Human Resource Management***, 26(22): 2853-2871.

Colvin, A. J., & Darbishire, O. 2013. Convergence in industrial relations institutions: the emerging Anglo-American model?. ***Industrial & Labor Relations Review***, *66*: 1047–1212.

Corley, K. G., & Gioia, D. A. 2011. Building theory about theory building: what constitutes a theoretical contribution?. ***Academy of Management Review***, 36(1): 12-32.

Danna, K., & Griffin, R. W. 1999. Health and well-being in the workplace: A review and synthesis of the literature. ***Journal of Management***, 25(3): 357−384.

Datta, D. K., Guthrie, J. P., Basuil, D., & Pandey, A. 2010. Causes and effects of employee downsizing: A review and synthesis. ***Journal of Management***, 36: 281–348.

Diener, E. 1984. Subjective well-being. ***Psychological Bulletin***, 95: 542−575.

Eby, L. T., Freeman, D. M., Rush, M. C., & Lance, C. E. 1999. Motivational bases of affective organizational commitment: A partial test of an integrative theoretical model. ***Journal of Occupational and Organizational Psychology***, 72: 463−483.

Eagly, A. H., & Chaiken, S.1993. ***The psychology of attitudes***. Fort Worth, TX: Harcourt Brace Jovanovich.

The Economist. (2013, September 7). The origins of the financial crisis: Crash course. ***The Economist***. Retrieved December 17, 2014, from http://www.economist.com/news/schoolsbrief/21584534-effects-financial-crisis-are-still-being-felt-five-years-article.

Eilam-Shamir, G., & Yaakobi, E. 2014. Effects of early employment experiences on anticipated psychological contracts. ***Personnel Review***, 43(4): 553−572.

Fiorito, J., Bozeman, D. P., Young, A., & Meurs, J. A. 2007. Organizational commitment, human resource practices, and organizational characteristics. ***Journal of Managerial Issues***, 186−207.

Fisher, R., & Ury, W. 1981. ***Getting to yes: Negotiating agreement without giving in***. Boston: Houghton Mifflin Company.

Folger, R., & Konovsky, M. A. 1989. Effects of procedural and distributive justice on reactions to pay raise decisions. ***Academy of Management Journal***, 32(1): 115−130.

Gartrell, C. D., & Paille, B. E. 1997. Wage cuts and the fairness of pay in a worker-owned plywood cooperative. ***Social Psychology Quarterly***, 103−117.

Gerhart, B., Rynes, S. L., & Fulmer, I. S. 2009. Pay and performance: Individuals, groups, and executives. ***The Academy of Management Annals***, 3: 251−315.

Gilson, C., Hurd, F., & Wagar, T. 2004. Creating a concession climate: the case of the serial downsizers. ***The International Journal of Human Resource Management***, 15(6): 1056−1068.

Gong, Y., Law, K. S., Chang, S., & Xin, K. R. 2009. Human resources management and firm performance: The differential role of managerial affective and continuance commitment. ***Journal of Applied Psychology***, 94: 263−275.

Goodman, L. A. 1960. On the exact variance of products. ***Journal of the American Statistical Association***, 55(292): 708-713.

Greenberg, J. 1989. Cognitive reevaluation of outcomes in response to underpayment inequity. ***Academy of Management Journal***, 32(1): 174−184.

Greenberg, J. 1990. Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. ***Journal of Applied Psychology***, 75(5): 561−568.

Greene, C. N. 1973. Causal connections among managers' merit pay, job satisfaction, and performance. ***Journal of Applied Psychology***, 58(1): 95−100.

Hackett, R. D. and Guion, R. M. 1985. A reevaluation of the absenteeism-job satisfaction relationship. ***Organizational Behavior and Human Decision Processes***, 35: 340–381.

Hall, P. A., & Soskice, D. (Eds.). 2001. ***Varieties of capitalism: The institutional foundations of comparative advantage***. Oxford: Oxford University Press.

Heneman III, H. G., & Schwab, D. P. (1985). Pay satisfaction: Its multidimensional nature and measurement. ***International Journal of Psychology***, 20(2): 129–141.

Hofmann, D. A. 1997. An overview of the logic and rationale of hierarchical linear models. ***Journal of Management****, 23*: 723–744.

Hofstede, G. 1980. ***Culture's consequences: International differences in work-related values***. Beverly Hills, CA: Sage.

Hobson, J. (2009, February 16). Would you like a pay cut or layoff? ***Marketplace***. Retrieved October 6, 2012, from http://www.marketplace.org/topics/business/fallout-financial-crisis/would-you-pay-cut-or-layoff-0.

Holman, D., Frenkel, S., Sorensen, O., & Wood, S. 2009. Work design variation and outcomes in call centers: Strategic choice and institutional explanations. ***Industrial and Labor Relations Review****, 62*: 510–532.

Huang, X., & Van de Vliert, E. 2003. Where intrinsic job satisfaction fails to work: National moderators of intrinsic motivation. ***Journal of Organizational Behavior****, 24*: 159–179.

Judge, T. A., Thoresen, C. J., Bono, J. E. and Patton, G. K. 2001. The job satisfaction–job performance relationship: A qualitative and quantitative review. ***Psychological Bulletin***, 127: 376–407.

Kim, S. 2005. Individual-level factors and organizational performance in government organizations. ***Journal of Public Administration Research and Theory***,15(2): 245-261.

Koys, D. J. 2001. The effects of employee satisfaction, organizational citizenship behavior, and turnover on organizational effectiveness: A unit-level, longitudinal study. ***Personnel Psychology***, 54(1): 101−114.

Kraimer, M. L., Wayne, S. J., Liden, R. C., & Sparrowe, R. T. 2005. The role of job security in understanding the relationship between employees' perceptions of temporary workers and employees' performance. ***Journal of Applied Psychology***, 90(2): 389−398.

Krefting, L. A., & Mahoney, T. A. 1977. Determining the size of a meaningful pay increase. ***Industrial Relations***, 16(1): 83−93.

Krull, J. L., & MacKinnon, D. P. 1999. Multilevel mediation modeling in group-based intervention studies. ***Evaluation Review***, 23: 418−444.

Krull, J. L., & MacKinnon, D. P. 2001. Multilevel modeling of individual and group level mediated effects. ***Multivariate Behavioral Research***, 36: 249−277.

Lee, D., & Rupp, N. G. 2007. Retracting a gift: How does employee effort respond to wage reductions?. ***Journal of Labor Economics***, 25: 725−761.

Lewin, D. (2009, January 29). Cut pay, not people. ***The Wall Street Journal***. Retrieved October 6, 2012, from http://online.wsj.com/article/SB123326826586730619.html.

Locke, E. 1976. The nature and causes of job satisfaction. In M. D. Dunrette (Eds.), ***Handbook of industrial and organizational psychology***, 1297–1350. Chicago: Rand McNally.

Loewenstein, G., & Sicherman, N. 1991. Do workers prefer increasing wage profiles?. ***Journal of Labor Economics***, 9: 67−84.

Lovett, S., Coyle, T., Banerjee, G., & Hardebeck, S. 2008. Measuring managerial effectiveness in handling pay cuts. ***Journal of Applied Management and Entrepreneurship***, 13(4), 23−46.

Luthans, B. C., & Sommer, S. M. 1999. The impact of downsizing on workplace attitudes differing reactions of managers and staff in a health care organization. ***Group & Organization Management***, 24: 46−70.

Maertz, C. P., Stevens, M. J., & Campion, M. A. 2003. A turnover model for the Mexican Maquiladoras. ***Journal of Vocational Behavior****,* 63: 111–135.

Marsden, P. V., Kalleberg, A. L., & Cook, C. R. 1993. Gender differences in organizational commitment influences of work positions and family roles. ***Work and Occupations***, 20(3): 368–390.

Mathieu, J. E., & Taylor, S. R. 2007. A framework for testing meso-mediational relationships in Organizational Behavior. ***Journal of Organizational Behavior***, 28: 141−172.

Mathieu, J. E., & Zajac, D. M. 1990. A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. ***Psychological Bulletin***, 108: 171–194.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. 2002. Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. ***Journal of Vocational Behavior***, 61(1): 20−52.

Mitra, A., Gupta, N., & Jenkins G. D. 1997. A drop in the bucket: When is a pay raise a pay raise?. ***Journal of Organizational Behavior***, 18(2): 117−137.

Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment. ***Journal of Vocational Behavior***, 14: 224−247.

Muthen, L. K., & Muthen, B. O. 2012. ***Mplus: Statistical analysis with latent variables: User's guide***. Los Angeles: Muthen & Muthen.

Nagy, M. S. 2002. Using a single-item approach to measure facet job satisfaction. ***Journal of Occupational and Organizational Psychology***, 75: 77−86.

Omer, S. (2008, December 30). Would you take a pay cut to save jobs? ***NBC News***. Retrieved November 4, 2013, from http://www.nbcnews.com/id/28198637/#.UnhuvpS_d3Z.

Organ, D. W. and Konovsky, M. 1989. Cognitive versus affective determinants of organizational citizenship behavior. ***Journal of Applied Psychology***, 74: 157–164.

Ostroff, C. 1992. The relationship between satisfaction, attitudes, and performance: An organizational level analysis. ***Journal of Applied Psychology***,77: 963−974.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y. and Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. ***Journal of Applied Psychology***, 88, 879–903.

Rampell, C. (2008, November 18). Reader feedback: Why layoffs instead of wage cuts? ***Economix***. Retrieved April 30, 2013, from http://economix.blogs.nytimes.com/2008/11/18/reader-feedback-why-layoffs-instead-of-wage-cuts/.

Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R. T., & du Toit, M. 2011. ***HLM 7***. Lincolnwood, IL: Scientific Software International Inc.

Robinson, S. L., & Morrison, E. W. 1995. Organizational citizenship behavior: A psychological contract perspective. ***Journal of Organizational Behavior***, 16(3): 289−298.

Roese, N. J., & Olson, J. M. (Eds.). 1995. ***What might have been: The social psychology of counterfactual thinking***. Mahwah, NJ: Lawrence Erlbaum Associates Inc.

Rousseau, D. M. 1995. ***Psychological contracts in organizations: Understanding written and unwritten agreements***. Thousand Oaks, CA: SAGE Publications

Rousseau, D. M., & Tijoriwala, S. A. 1998. Assessing psychological contracts: Issues, alternatives and measures. ***Journal of organizational Behavior***, 19: 679−695.

Shaw, J. D., Duffy, M. K., Mitra, A., Lockhart, D. E., & Bowler, M. 2003. Reactions to merit pay increases: A longitudinal test of a signal sensitivity perspective. ***Journal of Applied Psychology***, 88(3): 538−544.

Snorradottir, A., Vilhjalmsson, R., Rafnsdottir, G. L., & Tomasson, K. 2013. Financial crisis and collapsed banks: Psychological distress and work related factors among surviving

employees−A nation-wide study. ***American Journal of Industrial Medicine***, 56(9): 1095−1106.

Smith, J. C. 2002. Pay cuts and morale: a test of downward nominal rigidity. ***Warwick Economic Research Papers***.

Smith, P. C., Kendall, L. M., & Hulin, C. L. 1969. ***The measurement of satisfaction in work and retirement***. Chicago: Rand McNally.

Strauss, G. (2014, September 8). 2015 pay raises expected to be 3% next year. ***USA Today***. Retrieved April 27, 2015, from http://www.usatoday.com/story/money/business/2014/09/07/2015-pay-raises-should-average-3/15136423/.

Tosi, H., & Greckhamer, T. 2004. Culture and CEO compensation. ***Organization Science***, *15*: 657–670.

Travaglione, A., & Cross, B. 2006. Diminishing the social network in organizations: Does there need to be such a phenomenon as 'survivor syndrome' after downsizing?. ***Strategic Change***, 15: 1−13.

Vroom, V. H. 1964. ***Work and motivation***. New York: Wiley.

Wagar, T. H. 1998. Exploring the consequences of workforce reduction. ***Canadian Journal of Administrative Sciences***, 15(4): 300−309.

Warr, P. 1990. The measurement of well-being and other aspects of mental health. ***Journal of Occupational Psychology***, 63(3): 193−210.

Wright, T. A., & Bonett, D. G. 1997. The role of pleasantness and activation-based well-being in performance prediction. ***Journal of Occupational Health Psychology***, 2: 212−219.

Wright, T. A., & Bonett, D. G. 2002. The moderating effects of employee tenure on the relation between organizational commitment and job performance: A meta-analysis. ***Journal of Applied Psychology***, 87: 1183−1190.

Wright, T. A., Bonett, D. G., & Sweeney, D. A. 1993. Mental health and work performance: Results of a longitudinal field study. ***Journal of Occupational and Organizational Psychology***, 66: 277−284

Wright, T. A., & Cropanzano, R. 2000. Psychological well-being and job satisfaction as predictors of job performance. ***Journal of Occupational Health Psychology***, 5(1): 84−94.

PAPER 2

PAY CUTS VS. DOWNSIZING IN MAINTAINING WORK ATTITUDES OF REMAINING EMPLOYEES: HOW TRUST IN MANAGEMENT MODERATES THIS COMPARISON

Abstract

Despite the increase in payroll cost reduction activities (i.e., cutting pay and downsizing), previous studies directly comparing the effects of cutting pay and downsizing on work attitudes have been limited. More importantly, no effort has been made to identify moderators in this comparison. Utilizing both a within-subject design experiment and secondary data analysis, the current research identifies trust in management as one such moderator in this comparison. Results demonstrate that when the level of trust in management is low, employees who had their pay cut exhibit lower levels of work attitudes than employees who survived downsizing. When the level of trust in management is high, on the other hand, employees who had their pay cut did not exhibit lower levels of work attitudes than employees who survived downsizing. Moreover, when the level of trust in management is high, feelings of job security are strengthened among pay-reduced employees (compared to employees who survived downsizing). The results demonstrate that, in order to maintain the work attitudes of employees, high levels of trust in management are necessary for pay cuts to be a feasible alternative to downsizing.

Keywords: Payroll cost reduction, cutting pay, reducing pay, pay cuts, pay reduction, downsizing, layoff, work attitudes, affective commitment, job satisfaction, trust in management

Introduction

With many developed societies transitioning into labor-intensive-structured economies (e.g., growth in service sector: Soubbotina & Sheram, 2000), payroll cost (i.e., cost of wages and salaries) has become one of the largest operating costs for today's organizations (Bureau of Labor Statistics, 2015, Gerhart, Rynes, and Fulmer, 2009). Due to the pressure to reduce costs while maximizing productivity to survive in today's competitive environment, organizations are often forced to reduce their payroll costs while maximizing favorable employee work attitudes. With the increased interest in inequality in today's world, however, organizations are also often confronted with the pressure from society to cut pay of employees and share the pain as a group rather than to downsize the organization (e.g., lay off employees) when payroll costs need to be reduced (e.g. Hobson, 2009; Lewin, 2009; Omer, 2008; Rampell. 2008). As a result, the question of whether cutting pay is a feasible alternative to downsizing for maintaining employees' work attitudes is a critical question for management.

Despite the importance of the question, studies that directly compare the effects of cutting pay and downsizing on work attitudes are extremely limited. Past studies of payroll cost reduction tend to investigate the effect of cutting pay (e.g. Greenberg, 1990; Lovett, Coyle, Banerjee & Hardebeck, 2008; Smith, 2002) or downsizing (e.g. Allen, Freeman, Russel, Reizenstein & Rentz, 2001; Brockner et al., 2004; Luthans & Sommer, 1999; Travaglione & Cross, 2006) in isolation. There are, however, few studies that include both pay cut and downsizing cases with work attitude variables (Eilam-Shamir & Yaakobi, 2014; Fiorito, Bozeman, Young & Meurs, 2007; Snorradottir, Vilhjalmsson, Rafnsdottir & Tomasson, 2013) and thus can be used to "infer" answers to the question of interest. Nevertheless, the literature lacks a theoretical framework that predicts for whom and when one method is more or less effective than the other method for maintaining work attitudes.

The current research tries to address these concerns in the field by incorporating trust in management as a moderator when comparing the effects of cutting pay and downsizing on work attitudes. By taking a relative reward perspective and incorporating the instrumentality factor from expectancy theory (Vroom, 1964), the research meaningfully extends the literature by establishing a framework that predicts the relative effectiveness of payroll cost reduction methods (i.e., cutting pay vs. downsizing) under different levels of trust in management. Moreover, the framework provides management with a research-based strategic guide to consider the level of employee trust in management when deciding which method to implement when payroll costs need to be reduced.

Theoretical Background and Hypotheses

Payroll cost reduction methods

To perform given tasks at a given point in time, an organization utilizes a certain number of employees at certain pay rates. An organization's total payroll cost (i.e., cost of salaries and wages) at a given point in time, thus, is the function of number of workers that the organization utilizes and their pay rates. To reduce payroll cost, therefore, an organization can apply one or both of the following two methods. First, the reduction can be achieved through decreasing the average pay rate of employees. This can be done by cutting pay rates of all or some of the organization's employees. Second, the reduction in payroll cost can be accomplished via reducing the total number of workers that the organization utilizes. In this study, the former practice of cutting pay rates will be labeled as pay cuts (or cutting pay). The latter practice of reducing number of employees will be labeled as downsizing.

Compared objects in this paper

After its payroll cost has been reduced, an organization needs to perform given tasks using its remaining employees who are likely to be affected by the payroll cost reduction measures. The

current study identifies situations where one payroll cost reduction method (i.e., cutting pay or downsizing) better maintains the work attitudes of employees who are affected by the measure but still work for the organizations that have taken this measure. As a result, the subjects to be compared in this paper are the employees who had their pay cut in pay-reduced organizations and the survivors in downsized organizations. The current study is less concerned with the work attitudes of employees who did not have their pay cut in pay-reduced organizations and employees who are dismissed in downsized organizations. Hereinafter, therefore, work attitudes of employees will be referring to work attitudes of employees who had their pay cut in pay-reduced organizations and those of survivors in downsized organizations.

Past studies and relative reward perspective

The dominant theoretical framework utilized in past studies investigating the impact payroll cost reduction (i.e., cutting pay and downsizing) on work attitudes was the psychological contract theory (Rousseau, 1995). The theory postulates an implicit agreement that sets out expected obligations between an employee and organization (Levinson, Price, Munden, Mandl, & Solley, 1962; Morrison & Robinson, 1997; Rousseau, 1989, 1995; Rousseau & Tijoriwala, 1998; Schein, 1965; Sims, 1994). The psychological contract can be shaped or altered through various instruments: documents, conversations, policies, etc. (Morrison & Robinson, 1997; Rousseau & Greler, 1994; Rousseau & McLean Parks, 1993). HR practices are often viewed as strong instruments that shape or alter psychological contracts (Rousseau & Greler, 1994). The theory predicts that, when the psychological contract is upheld, employees reciprocate with favorable work-related attitudes such as commitment (Rousseau & Tijoriwala, 1998). However, the theory also anticipates that employees reciprocate with unfavorable work-related attitudes if the psychological contract is violated and modified in a way that is disadvantageous to employees (Rousseau & Tijoriwala, 1998).

Past studies examining the relationship between pay cuts and work attitude often view cutting pay as a violation of the psychological contract, as the promised rate of labor is reduced (Chambel & Fortuna, 2015; Fiorito et al., 2007; Lovett et al., 2008). Studies investigating the effect of downsizing on work attitudes also regard downsizing as a violation of the implicit contract, as employees anticipate their efforts to be repaid with a stable work environment (Datta, Guthrie, Basuil, and Pandey, 2010). Although the survivors of downsizing have "survived" the event, they may expect less stability in their work environment or in the future relationship with the organization after the event. Although the two events (i.e. cutting pay and downsizing) differ in the reasons for the violation of the psychological contract, both events are viewed as the violation of the implicit contract and the framework predicts that employees will reciprocate with lower level of (or with unfavorable) work attitudes. Supporting this argument, studies show that both survivors of downsizing (Brockner et al., 2004; Gilson, Hurd & Wagar, 2004; Luthans & Sommer, 1999; Wagar, 1998) and employees who had their pay cut (Lovett et al., 2008, Smith, 2002) exhibit lower levels of work attitudes (e.g. organizational commitment and satisfaction with job and pay) than employees under conditions without these events.

Past studies utilizing the psychological contract framework focus on what is violated or "lost" when investigating the attitudinal effects of payroll cost reduction. Studies of downsizing focus on the notion that employees have lost the stability of their work environment, while pay cut studies focus on employees losing some portion of their pay. Due to an emphasis on what is "lost", past studies have predominantly, and quite limitedly, focused on fairness and justice as moderators in the relationship between payroll cost reduction and employee attitudes. The key objective of these studies was to identify methods or situations that maintain employees' fairness or justice perceptions in payroll cost reduction processes. For example, studies have focused on moderators such as communication (e.g. Greenberg, 1990), perceived control (e.g. Armstrong-Stassen, 1994,

Brockner et al., 2004), and supervisor support (e.g. Armstrong-Stassen, 1994, Brockner et al., 2004). Thus, our knowledge from past research is limited to the findings that payroll cost reduction leads to a decrease in work attitudes and that managing the process more fairly helps attenuate this effect.

The focus on what is "lost" in the theoretical framework of psychological contract well explains why and how payroll cost reduction methods (i.e., cutting pay or downsizing) negatively impact work attitudes. However, the framework cannot be applied to identify moderators in the model comparing the effects of cutting pay and downsizing on work attitudes. To predict conditions where one method is more or less effective than the other, we also need to focus on the relative advantages as well as disadvantages of each method.

To answer the question of to whom and when one method (i.e., cutting pay or downsizing) is more or less effective for maintaining work attitudes, we need to shift our focus from what is "lost" to what is "relatively remained (or rewarded)". The shift in perspective will be labeled as the relative reward perspective. Utilizing the relative reward perspective in building a comparative framework of cutting pay and downsizing is reasonable for the following two reasons. First, each method (i.e., cutting pay or downsizing) has a relative benefit to employees when the consequences are viewed in a comparative manner. This is because although organizations have violated a part of the psychological contract by cutting pay or downsizing, there are other parts of the psychological contract that are kept by implementing one method but not the other method. By cutting pay but not downsizing, an organization has kept the promise of providing a stable work environment despite the fact that it has failed to maintain the exchange rate of labor. By downsizing but not cutting pay, an organization has kept the promise of maintaining the exchange rate of labor despite the fact that it has failed to provide a stable work environment. Second, in general, people think not just of the consequences of the event that has occurred but also of the consequences of possible alternatives (counterfactual thinking: Byrne, 2005; Roese & Olson,

1995a). And studies demonstrate that not only people think counterfactually, but also form attitudes based on the process of counterfactual thinking (Gleicher et al., 1995; Roese & Olson, 1995b). Organizations that have implemented pay cuts or downsizing are likely to already be in needs of reducing payroll costs. Therefore, a realistic alternative to an employee who had his or her pay cut is to experience the process of downsizing and potentially lose his or her job. In a similar vein, a realistic alternative of an employee who survived the downsizing is to have his or her pay cut but to feel relatively more secure in the future relationship with the organization. As a result, we can expect that employees who had their pay cut form attitudes by considering and comparing the outcomes of going through the process of downsizing (and vice versa for survivors of downsizing).

Based on the relative reward perspective, we can expect that employees who had their pay cut feel better about their job security. On the other hand, we can expect that employees who survived downsizing feel better about their pay-level. If we assume that higher levels of job security and pay are both valued by employees in general, and that employees form more favorable attitudes toward their benefit provider (Eagly & Chaiken, 1993), we can expect that the two payroll cost reduction methods (cutting pay and downsizing) each have different advantageous and disadvantageous mechanisms in maintaining work attitudes. Cutting pay, compared to downsizing, has an advantage in maintaining favorable work attitudes of employees by making them feel better about their job security. Simultaneously, however, cutting pay also has a disadvantage in maintaining work attitudes by making them feel less well about their pay-levels (vice versa for downsizing when compared to cutting pay). Thus, I hypothesize as follows.

Hypothesis 1*: Cutting pay, compared to downsizing, has stronger positive indirect relationships with work attitudes through having a stronger positive relationship with the perception of relative advantage in job security and this perception having positive*

relationships with work attitudes.

Hypothesis 2*: Cutting pay, compared to downsizing, has stronger negative indirect relationships with work attitudes through having a stronger negative relationship with the perception of relative advantage in pay-level and this perception having positive relationships with work attitudes.*

Moderating effect of trust in management in this comparison

If we view the outcomes of cutting pay and downsizing from the perspective of relative rewards that employees receive, expectancy theory (Vroom, 1964) can be utilized to identify contextual factors. Expectancy theory (Vroom, 194), also often referred as the VIE theory, hypothesizes that a reward is motivating to a person if the person (a) values the reward (Valance), (b) believes that fulfilling the precondition of receiving a reward (e.g., performance, behavior, act, etc.) leads to the actual reception of the reward (Instrumentality), and (c) believes that his or her effort will lead to fulfilling the precondition of receiving a reward (Expectancy).

To model how trust in management can moderate the comparison of the effects of cutting pay versus downsizing in maintaining work attitudes, I focus on the instrumentality factor. On average, it can be expected that the level of instrumentality is higher for survivors of downsizing than for employees whose pay is cut when receiving their relative rewards. When downsizing is implemented, survivors receive their relative reward (i.e., maintaining pay-level) instantly. Instrumentality is therefore less of a concern for survivors of downsizing. However, in the case of cutting pay, the relative reward that pay-reduced employees receive (i.e., job security) is deferred in that some assurance is needed for the reward to be realized. For example, if employees feel that cutting pay is only the beginning in the process of reducing costs and that their job might be in danger in the future, the perceived instrumentality level in receiving the reward (i.e., job security) is low. Some assurance is needed for employees to feel that they will actually be better off in terms

of job security. As a result, when only the instrumentality factor is considered, we can expect that survivors of downsizing will be more motivated than employees who had their pay cut.

When there are factors that strengthen the instrumentality level of pay-reduced employees, however, this difference in motivation can be reduced. For example, if there are strong protections for jobs, such as a labor law that discourages downsizing or a job protection agreement between union and organization, less assurance is needed for the relative reward of pay-reduced employees (i.e., job security) to be realized. Therefore, under such circumstances, the belief that the organization has cut the pay of its employees to protect their jobs may be stronger and the motivational gap between survivors of downsizing and employees who had their pay cut might be reduced.

Once such factor that increases the instrumentality level of pay-reduced employees is trust in management. Trust refers to "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of another" (Rousseau, Sitkin, Burt & Camerer, 1998: 395). When employees trust managers, who are viewed as the agents or representatives of the organization, pay-reduced employees might better accept the intention of the organization in reducing its payroll cost and believe that the organization will deliver the relative rewards of cutting pay (i.e., job security). Therefore, when pay-reduced employees trust their managers, the perception of relative advantage in job security might be strengthened; the difference in the level of work attitudes may decrease or even be in favor of pay-reduced employees over downsizing survivors. Thus, I hypothesize as follows.

> ***Hypothesis 3****: Trust in management moderates the comparison of the effects of payroll cost reduction method (cutting pay versus downsizing) on the perception of relative advantage in job security. Cutting pay (compared to downsizing) has a more positive relationship with the perception of relative advantage in job security when the level of trust in*

management is high.

Since the trust in management strengthens the perception of relative advantage in job security of pay-reduced employees and this perception is positively related to work attitudes, by extension, I also hypothesize as follows.

Hypothesis 4*: The comparison in the effects of payroll cost reduction method (cutting pay versus downsizing) on work attitudes is moderated by trust in management, such that cutting pay (compared to downsizing) has a less negative (or more positive) relationship with work attitudes when the level of trust in management is high (compared to when the level of trust in management is low).*

Hypothesized model is shown in Figure 2A.

==========
Insert Figure 2A about here
==========

Study 1

In this study, the hypotheses are tested by conducting a within-subject design online experiment. For examining work attitudes of employees, attitudes related to two subjects (organization and job) were measured. First, organizations can be viewed as the initiator of payroll cost reduction (i.e., cutting pay or downsizing). As a result, cutting pay or downsizing can alter employees' work attitudes related to organizations. Moreover, implementing payroll cost reduction can also affect employees' work attitudes related to jobs since a person's job is a medium that links the person to the organization. In line with this argument, measurements of job attitudes (e.g., job satisfaction) in various studies often measure attitudes not only of the aspect of work itself but also of other organization-related aspects such as work environment and relationships with managers and coworkers (e.g. Smith, Kendall & Hulin, 1969; Spector, 1985; Taylor & Bowers, 1974; Warr, Cook & Wall, 1979; Weiss, Dawis, England & Lofquist, 1967).

For work attitudes related to organizations, affective commitment has been examined. Affective commitment refers to the strength of emotional attachment to and acceptance of values and goals of the organization that an employee works for (Allen & Meyer, 1990; Gong, Law, Chang & Xin, 2009; Mowday, Steers, & Porter, 1979). Affective commitment has been reviewed intensively in various areas due to its significant relationships with important managerial outcomes such as performance, turnover, absenteeism and organizational citizenship behavior (e.g., Gong et al., 2009; Meyer, Stanley, Herscovitch & Topolnytsky, 2002).

For attitudes toward jobs, job satisfaction has been investigated. Job satisfaction can be defined as an appraisal of a person's job or job experiences (Locke, 1976). The construct has been examined widely by researchers due to its significant relationships with important managerial outcomes at the individual-level such as job performance, organizational citizenship behavior, turnover and absenteeism (Carsten & Spector, 1987; Hackett & Guion, 1985; Judge, Thoresen, Bono & Patton, 2001; Organ & Konovsky, 1989) as well as the outcomes at the organizational-level such as customer satisfaction (Koys, 2001).

Study 1: Method

Overview and sample

To conduct a within-subjects design online experiment, I solicited 138[5] subjects from Amazon Mechanical Turk. Participants had to be employed (those who were not employed, self-employed, students, or owners of businesses were excluded), over 18 years of age, and reside in the United States. Subjects were 49.3 percent female, 90.6 percent full-time employed, 53.6 percent with an undergraduate or higher degree, and with 6.4 years of organizational tenure (SD = 5.7). In terms of age, 28.3, 36.2, 21.7, 10.1 and 3.6 percent of participants were in 20s, 30s, 40s, 50s and 60s or older, respectively. The study took about 10 minutes to complete, and subjects who

[5] *Responses from 201 subjects were originally collected. However, 63 respondents (30.8 percent) did not answer the attention check question correctly. These individuals' responses were excluded from the analysis.*

completed the study were paid one dollar.

In the beginning of the experiment, a participant's baseline levels of dependent variables (i.e., affective commitment and job satisfaction toward their current organization and job, respectively) and trust in management were measured. In the next part of the online experiment, a participant read a scenario stating that his or her organization is suffering from a poor financial performance and currently is in need to reduce its payroll cost by 10 percent. In the third part of the experiment, a participant first read about two possible methods that the organization might adopt to reduce its payroll cost (i.e., cutting pay and downsizing). The participant then read two sub-scenarios stating the payroll cost reduction method that the organization has implemented to overcome the challenge. The first sub-scenario showed that the organization has reduced 10 percent of pay of all of its workers, including the participant's pay (Sub-Scenario 1: Pay cut). On the other hand, the second sub-scenario showed that the organization has dismissed 10 percent of its workers (Sub-Scenario 2: Downsizing). In the downsizing sub-scenario, the participant was depicted as a downsizing survivor. After reading each sub-scenario, the participant answered two questions asking his or her anticipated levels of affective commitment, job satisfaction, and perceptions in relative advantage of job security and pay level under the sub-scenario. To account for the possible ordering effect, I randomized the order that these two sub-scenarios were presented. In the final part of the experiment, demographic data such as gender and age were collected and participants were debriefed.

Measures

Affective commitment. To measure affective commitment reflecting the hypothetical nature of the scenarios provided to respondents, I shortened and revised the measure by Marsden and colleagues (1993). Participants were presented with the following three statements (5-point scale of agreement and disagreement): "Under this change, I will be proud to be working for this

organization (Affective commitment 1)", "Under this change, I will feel very little loyalty to the organization that I work for (Affective commitment 2)" (reverse coded), and “Under this change, I will find that my values and the organization's are very similar (Affective commitment 3)".

Job satisfaction. To measure job satisfaction reflecting the hypothetical nature of the scenarios provided to respondents, I revised the measure by Cammann and colleagues (1983). Participants were asked with the following three statements (5-point scale of agreement and disagreement): "Under this change, I will like working here (Job satisfaction 1)", "Under this change, I will not like my job (Job satisfaction 2)" (reverse coded), and "Under this change, I will be satisfied with my job (Job satisfaction 3)".

Perception of relative advantage in job security / pay-level. These constructs were measured by asking to what extent the participant agreed or disagreed (5-point scale) with the following statement: "Because the management has decided *to cut pay rather than to downsize* (or *to downsize rather than to cut pay* in the downsizing sub-scenario), I will be better off with the following aspect of my job". To measure the perception of relative advantage in job security, the items for the *following aspect* were: *being sure I will always have a job* (Relative advantage: Job security 1), *being certain of keeping my job* (Relative advantage: Job security 2), and *being certain my job will last* (Relative advantage: Job security 3). To measure the perception of relative advantage in pay-level, the items for the *following aspect* were: *the amount of pay* (Relative advantage: Pay-level 1), *total compensation* (Relative advantage: Pay-level 2), and *salary level* (Relative advantage: Pay-level 3). Job security and pay-level items were adopted from the Work Values Survey by Cable and Edwards (2004).

Trust in management. Trust in management was measured by asking to what extent the participant agreed or disagreed (5-point scale) with the following six statements: "Management at my organization is sincere in its attempts to meet the workers' point of view

(Trust in management 1)", "I feel quite confident that the organization will always try to treat me fairly (Trust in management 2)", "Our management would be quite prepared to gain advantage by deceiving the workers (Trust in management 3)" (reverse coded), "Our organization has a poor future unless it can attract better managers (Trust in management 4)" (reverse coded), "Management can be trusted to make sensible decisions for the organization's future (Trust in management 5)", and "Management at work seems to do an efficient job (Trust in management 6)". This six-item measure was developed by Cook and Wall (1980) with the first three items reflecting the "faith" in management and the latter three items reflecting the "confidence" in management (McCauley & Kuhnhert, 1992).

Pay cut (compared to downsizing). The responses made under the pay cut sub-scenario were coded as 1. The responses made under the downsizing sub-scenario were coded as 0.

Control variables. Baseline levels of affective commitment and job satisfaction were controlled, as were various demographic variables (i.e., gender, age, education, full-time status, organizational tenure and work hour). The relationships of interest were significant (and in the same direction) in the models with and without these control variables. Only the results of the model without controls will be reported.

Analysis model

Given the nested data structure (i.e., one response under the pay cut scenario and another response under the downsizing scenario per respondent) and the multiple-item measurement structure, multi-level structural equation modeling (SEM) was utilized to test the model. Only the trust in management variable is at the respondent level and all the other variables in the model are at the response level. The model represents the random intercept model. Mplus 7.4 (Muthen & Muthen, 2012) was utilized for the analysis.

Study 1: Results

Descriptive statistics

Descriptive statistics and correlations among the variables in the study are presented in Table 2A. It is notable that the correlations between pay cut (compared to downsizing) and perceptions of relative advantage in job security is positive (e.g., *r* between pay cut and relative advantage: job security 1 = 0.249, $p < 0.01$) while the correlations between pay cut (compared to downsizing) and perceptions of relative advantage in pay-level is negative (e.g. *r* between pay cut and relative advantage: pay-level 1 = -0.652, $p < 0.01$).

==========
Insert Table 2A about here
==========

Confirmatory factor analysis

CFA model that treated affective commitment, job satisfaction, perception of relative advantage in job security, perception of relative advantage in pay level, and trust in management as separate latent factors yielded an acceptable fit to the observed covariance matrix ($\chi^2_{(57)} = 73.627$, $p = 0.068$; SRMR within = 0.017, SRMR between = 0.037; RMSEA = 0.033; CFI = 0.993). Moreover, the factor loadings were all significant at the one percent significance level. The one-factor model in which all the variables were loaded in a single factor, however, yielded a poor fit to the observed covariance matrix ($\chi^2_{(63)} = 1{,}342.483$, $p = 0.000$; SRMR within = 0.245, SRMR between = 0.037; RMSEA = 0.271; CFI = 0.451).

Within-Level model testing

Model fit. The hypothesized model (Model 1 in Figure 2B) fitted the data well ($\chi^2_{(56)} = 69.250$, $p = 0.110$; SRMR within = 0.063, SRMR between = 0.000; RMSEA = 0.029; CFI = 0.994). All the paths in this model were also significant at the five percent significance level.

==========
Insert Figure 2B about here
==========

Hypothesis 1. First, in Model 1 (Figure 2B), the path from pay cut (compared to downsizing) to perception of relative advantage in job security is significantly positive (estimate = 0.549, SE = 0.129, $p < 0.01$). Next, the paths from perception of relative advantage in job security to work attitudes are all significantly positive (estimate for affective commitment = 0.668, SE = 0.270, $p < 0.05$; estimate for job satisfaction = 0.504, SE = 0.242, $p < 0.05$). Finally, the indirect effects of 'pay cut (compared to downsizing) → perception of relative advantage in job security → work attitudes' were calculated. The estimate of unbiased variance (Goodman, 1960; Krull and McKinnon, 1999) was used to calculate the standard errors of indirect effects. When affective commitment was utilized as the work attitude, this indirect effect was significant at the five percent significance level (estimate = 0.367, SE = 0.168, $p < 0.05$; not shown in Figures). The indirect effect was also significant, but only at the ten percent significance level, when job satisfaction was utilized as the work attitude (estimate = 0.277, SE = 0.145, $p = 0.057$; not shown in Figures). The results overall support Hypothesis 1.

Hypothesis 2. First, in Model 1 (Figure 2B), the path from pay cut (compared to downsizing) to perception of relative advantage in pay-level is significantly negative (estimate = -1.610, SE = 0.103, $p < 0.01$). Next, the paths from perception of relative advantage in pay-level to work attitudes are all significantly positive (estimate for affective commitment = 0.227, SE = 0.082, $p < 0.01$; estimate for job satisfaction = 0.173, SE = 0.073, $p < 0.01$). Finally, indirect effects of 'pay cut (compared to downsizing) → perception of relative advantage in pay-level → work attitudes' were calculated using the unbiased variance (Goodman, 1960; Krull and McKinnon, 1999) as the estimate for calculating standard errors of the indirect effects. The indirect effects were all significantly negative (estimate for affective commitment = -1.075,

SE = 0.439, $p < 0.01$; estimate for job satisfaction = -0.811, SE = 0.392, $p < 0.05$; not shown in Figures). Therefore, Hypothesis 2 is supported.

Cross-Level model testing

Hypothesis 3. To test Hypothesis 3, I added paths from trust in management and perceptions of relative advantages and from the interaction term of 'pay cut (compared to downsizing) * trust in management' to perceptions of relative advantages in job security and pay-level (as in Model 2 in Figure 2C). In this model, the path from the interaction term of 'pay cut (compared to downsizing) * trust in management' to perception of relative advantage in job security was significantly positive (estimate = 0.647, SE = 0.075, $p < 0.01$). However, the path from the interaction term of 'pay cut (compared to downsizing) * trust in management' to perception of relative advantage in pay-level was not significant (estimate = -0.056, SE = 0.206, ns). This indicates that the relationship between pay cut (compared to downsizing) and perception of relative advantage in job security is amplified as the level of trust in management increases. However, the result also indicates that the relationship between pay cut (compared to downsizing) and perception of relative advantage in pay-level is not amplified as the level of trust in management increases. Thus, Hypothesis 3 is supported.

==========
Insert Figure 2C about here
==========

Split sample analysis

Hypothesis 4. To test Hypothesis 4, I conducted a split sample analysis. The original sample was divided into high and low trust sub-samples using a mean split method. In each sub-sample, I examined how pay cut (compared to downsizing) predicted the level of work attitudes. Hierarchical linear modeling (HLM) was utilized given the multi-leveled structure of the data.

The results of the split sample HLM analysis are shown in Table 2B. First, for the model predicting affective commitment, the coefficient of pay cut (compared to downsizing) on affective commitment is significantly positive in the high trust sub-sample (in Model A1 in Table 2B; estimate = 0.456, SE = 0.142, $p < 0.01$). This indicates that, in the high trust sub-sample, participants reported higher levels of (anticipated) affective commitment under the pay cut condition than in the downsizing condition. However, as shown in Model A2 in the same table, the coefficient of pay cut (compared to downsizing) on affective commitment is significantly negative in the low trust sub-sample (estimate = -0.279, SE = 0.121, $p < 0.05$). This indicates that, in the low trust sub-sample, participants reported lower levels of (anticipated) affective commitment in the pay cut condition than in the downsizing condition.

A similar pattern was found in the models predicting job satisfaction. As shown in Model B1 in Table 2B, the coefficient of pay cut (compared to downsizing) on job satisfaction is not significant in the high trust sub-sample (estimate = 0.133, SE = 0.140, ns). This indicates that, in the high trust sub-sample, there was no difference in the levels of job satisfaction between responses under the pay cut condition and those under the downsizing condition. However, as shown in Model B2 in the same table, the coefficient of pay cut (compared to downsizing) on job satisfaction is significantly negative in the low trust sub-sample (estimate = -0.470, SE = 0.147, $p < 0.01$). This indicates that, in the low trust sub-sample, participants reported lower levels of (anticipated) job satisfaction under the pay cut condition than in the downsizing condition.

Results in the split sample analysis demonstrate that, when the level of trust in management is low, the levels of work attitudes of employees who survived downsizing is significantly higher than that of employees who had their pay cut. In the case of high trust in management, on the other hand, no significant difference in the levels of job satisfaction was

observed between employees who had their pay cut and employees who survived downsizing. Moreover, employees who had their pay cut exhibited higher levels of affective commitment than employees who survived downsizing. Therefore, the results overall demonstrate that cutting pay (compared to downsizing) has a less negative (or more positive) effect on work attitudes when the level of trust in management is high (compared to when the level of trust in management is low). Thus, the results provide support for Hypothesis 4.

==========
Insert Table 2B about here
==========

Study 1: Discussion

The findings in Study 1 first indicate that cutting pay, compared to downsizing, has an advantage in maintaining work attitudes (i.e., affective commitment and job satisfaction) through having more positive relationship with the perception of relative advantage in job security. On the other hand, the findings also indicate that cutting pay, compared to downsizing, has a disadvantage in maintaining work attitudes through having less positive relationship with the perception of relative advantage in pay-level. The results therefore demonstrate that pay cut, compared to downsizing, has both relative advantages and disadvantages in maintaining work attitudes through different psychological mechanisms.

Second, and more importantly, findings in this study also indicate that the trust in management moderates this comparison by amplifying the positive path between cutting pay (compared to downsizing) and the perception of relative advantage in job security. Therefore, the findings indicate that pay cut can be a more feasible alternative to downsizing when the level of trust in management is high among employees.

Although the study provides some important implications, two significant methodological limitations are prevalent. First, the current study only compares the case of 10 percent cut in pay

and workforce. Although a 10 percent cut in pay is a reasonable magnitude when given the samples of pay studies investigating pay cuts (Gartrell & Paille, 1997; Greenberg, 1989, 1990; Lee & Rupp, 2007; Lovett et al., 2008; Smith, 2002), there may be a critical point where employees can no longer bear the consequences of cutting pay over downsizing. Therefore, the overall results may be altered under a different magnitude of cut in pay and downsizing. Future studies should examine cases of pay cuts and downsizing with various reduction magnitudes.

Second, and more importantly, the study only examines participants' "anticipated" attitudes and perceptions in hypothetical settings. As a result, we can be less confident in generalizing the results to a real work setting. To address this concern, I conducted a follow-up study and analyzed two secondary datasets to see if the patterns observed in Study 1 are also observed in samples of individuals in real work settings.

Study 2

To conduct Study 2, I searched for datasets containing variables of payroll cost reduction methods (i.e., cutting pay and downsizing) that individuals have experienced, level of these individuals' trust in management, and work attitudes of these individuals that were the outcomes of interest in Study 1 (i.e., affective commitment and job satisfaction). 2011 Workplace Employment Relations Study (WERS) dataset contained the first two variables and affective commitment. 2010 WageIndicator Survey (WIS) dataset contained the first two variables and job satisfaction. Therefore, for this second study, I have analyzed 2011 WERS (Study 2A) and 2010 WIS (Study 2B) to see whether the difference in the levels of work attitudes between employees who had their pay cut and employees who survived downsizing is moderated by trust in management as in Hypothesis 4. I was not able to locate a dataset that contained the mediating variables (i.e., perceptions of relative advantage in job security and

pay-level) in the theoretical model. Therefore, I was not able to test these additional hypotheses in Study 2.

Study 2A: Methods

Overview and sample

In Study 2A, 2011 Workplace Employment Relations Survey (WERS) in the United Kingdom was analyzed. WERS is a workplace-employee matched survey including information on workplace policies and workforce characteristics as well as various employee perceptions. The stratified sampling framework was utilized in the survey to emulate the economy of the United Kingdom (for details of 2011 WERS, see van Wanrooy et al., 2013). Employees who indicated that they were not working for current organizations during the most recent recession were excluded from the sample. This is because cutting pay and downsizing were measured by asking employees whether these events occurred in the organizations that they currently work for during the most recent recession (details will be discussed in the following *Measures* section). Excluding missing data, the final sample for the analysis consisted of 15,746 employees in 1,871 workplaces.

Measures

Affective commitment. Affective commitment was measured by asking an employee to which extent he or she agreed or disagreed (5-point scale) with the following three statements[6]: "I share many of the values of my organization", "I feel loyal to my organization", and "I am proud to tell people who I work for" ($\alpha = 0.851$). The measure is similar (but shortened) to the measure by Mowday and colleagues (1979).

Trust in management. The trust in management of a given employee was measured by

[6] *I did not include the question "Using my own initiative I carry out tasks that are not required as part of my job" in 2011 WERS for measuring affective commitment because the question more closely reflects the concept of organizational citizenship behavior (Organ, 1988). Including this question in measuring affective commitment did not change the overall analysis results.*

asking an employee to which extent he or she agreed or disagreed (5-point scale) with the following three statements: "Managers here can be relied upon to keep to their promises", "Managers here are sincere in attempting to understand employees' views", and "Managers here deal with employees honestly" ($\alpha = 0.922$). The measure is similar (but shortened) to Cook and Wall (1980) reflecting the "faith" in management.

Payroll cost reduction method: Pay cut. 2011 WERS asked employees whether the following eight events happened as the result of the most recent recession[7]: 1) work re-organization, 2) job change, 3) wage freeze or cut, 4) reduction in non-wage benefits, 5) reduction in contracted work hours, 6) restriction in work hours, 7) restriction in access to paid overtime, and 8) taking unpaid leave. Employees who indicated that their wage was frozen or cut (answer choice 3) were assigned to the pay cut group.

The measure of cutting pay in this study also encompasses the case of pay freeze. Because inflation rates from 2008 to 2011 in the United Kingdom were all positive (3.6 percent in 2008, 2.2 percent in 2009, 3.3 percent in 2010, and 4.5 percent in 2011)[8], the measure reflects pay cuts in "nominal" as well as "real" pay. It can be expected that real pay cuts also negatively affect employee attitudes as in the case of nominal pay cuts, as employees expect their pays to be increased at least at the level of inflation rate (Loewenstein & Sicherman, 1991). As a result, it is likely that maintaining the level of "real" pay is part of the psychological contract for employees in general. Supporting this argument, the media often compares the rate of pay raise with inflation rate to assess the adequacy of the raise amount (e.g. Brecht, 2014; Strauss, 2014). Moreover, a study by Smith (2002) demonstrates that both nominal pay cuts and pay freezes (also a real pay cut in this case due to positive inflation rate in the region during the period of data collection) is

---

[7] *No specific time period regarding "most recent recession" was mentioned out in 2011 WERS. However, given the time point that 2011 WERS was conducted, it is highly likely that respondents referred the event as to the recession of global financial crisis that started in 2008 when Lehman Brothers has collapsed (Economist, 2013).*

[8] *From the Office of National Statistics (http://www.ons.gov.uk).*

negatively related to employee attitudes (i.e., overall job satisfaction and pay satisfaction) with no significant difference in effect sizes.

Payroll cost reduction method: Downsizing. Human resource or industrial relations managers of the workplace were asked whether redundancy actions (either compulsory or voluntary) were taken in the workplace in response to the recent recession. Employees in organizations where managers responded that these actions were taken were coded as the survivors of downsizing.

Payroll cost reduction method: Neither pay cut nor downsizing. Employees who were not survivors of downsizing and did not have their pay cut were included in this group.

Payroll cost reduction method: Both pay cut and downsizing. Employees who were the survivors of downsizing *and* had their pay cut at the same time were included in this group. These employees were not again included in either the pay cut or survivors of downsizing groups. Thus, the four conditions (i.e. *pay cut*, *downsizing*, *neither pay cut nor downsizing* and *both pay cut and downsizing*) are mutually exclusive.

Control variables. Control variables were selected based on past studies examining employee commitment (e.g. Mathieu & Zajac, 1990) and their availability in 2011 WERS. Control variables entered in the analysis model are shown in Appendix 2A. Individual (age, gender, pay level, marital status, tenure, education level, temporary status, work hours and union member status), job (occupation and autonomy) and workplace (industry and workplace size) characteristics that can be related to either or both affective commitment and payroll cost reduction methods were controlled. Work hour reduction was also included as a control variable for the following two reasons. First, there is a possibility that the practice is related to cutting pay or downsizing (e.g. organizations that reduce work hours of their employees may be less likely to implement pay cut or downsizing) and also affects work attitudes. Second, it is also possible that an employee whose work hour is reduced, but whose pay "rate" is not reduced,

has answered that his or her pay is cut or frozen. An employee can perceive that his or her "total pay amount" is reduced due to the restriction in work hours and have answered that his or her pay has been cut or frozen. However, since the theoretical framework in this study relies on pay "rate" cut, incidents where work hour reduction is recognized as cutting pay should be excluded. Therefore, work hour reduction was controlled to more precisely estimate the relationships between cutting pay and work attitudes.

Analysis model

Due to the multi-leveled structure (i.e. employees nested in workplaces) of the data (Hofmann, 1997), hierarchical linear modeling (HLM) was utilized. Two-level HLM analysis was applied. The level-1 analysis models the relationship between individual level variables (e.g., pay cut vs. downsizing, trust, and controls) and affective commitment. The level-2 analysis models the relationship between workplace level variables (e.g., workplace size and industry) and affective commitment. As in Study 1, the model represents the random intercept model. ICC(1) value for affective commitment was 0.168, suggesting the need for adopting a multi-level (e.g., HLM) method (Bliese, 2000; Krull & McKinnon, 2001). HLM7 (Raudenbush, Byrk, Cheong, Congdon & du Toit, 2011) was used in the analysis. The equations used for the analysis are as follows.

(Level 1 Equation)

$$\textit{Affective commitment}_{ij} = \beta_{0j} + \beta_1 * \textit{Pay cut}_{ij} + \beta_2 * \textit{Both pay cut and downsizing}_{ij} + \beta_3 * \textit{Neither pay cut nor downsizing}_{ij} + \beta_k * \textit{Level-1 controls}_{ij} + \varepsilon$$

(Level 2 Equations)

$$\beta_{0j} = \gamma_{00} + \gamma_{0m} * \textit{Level-2 controls}_j + \mu_{0j} \quad / \quad \beta_1 = \gamma_{10} \quad / \quad \beta_2 = \gamma_{20} \quad / \quad \beta_3 = \gamma_{30} \quad / \quad \beta_k = \gamma_{k0}$$

Pay cut, *Both pay cut and downsizing*, and *Neither pay cut nor downsizing* in the Level 1

Equation are dummy variables denoting 1 as employees in the variable name groups and 0 as otherwise. Therefore, the base for comparison in Level 1 Equation is the survivors of downsizing and β_1 denotes the difference in the average level of affective commitment between employees who had their pay cut and employees who survived downsizing. Split sample (high trust sample vs. low trust sample) HLM analysis was conducted to see whether the values of β_1 in high and low trust samples differ in accordance with Hypotheses 4. For more intuitive interpretation of the results, affective commitment was standardized.

Study 2A: Results

Descriptive statistics

The means, standard deviations and correlations of the variables are shown in Table 2C. Mean values of pay cut (0.187), downsizing (0.204) and both pay cut and downsizing (0.190) indicate that 18.7 percent, 20.4 percent, and 19.0 percent of employees in the sample experienced pay cut (including "real" pay cut or pay freeze), downsizing, and both pay cut and downsizing, respectively. In sum, 58.1 percent of the employees in the sample had their pay cut and/or survived downsizing during the most recent recession. Although these numbers include the cases of pay freeze (or "real" pay cut), they indicate that payroll cost reduction was a widespread practice during the recession in the United Kingdom. Also notable is the difference in the correlations between payroll cost reduction methods and affective commitment (*r* between pay cut and affective commitment = -0.054, $p < 0.01$; *r* between downsizing and affective commitment = 0.017, $p < 0.05$; *r* between both pay cut and downsizing and affective commitment = -0.099, $p < 0.01$; *r* between neither pay cut nor downsizing and affective commitment = 0.108, $p < 0.01$).

==========
Insert Table 2C about here
==========

HLM Results

Hypothesis 4. The results of the split sample HLM analysis are presented in Table 2D. In the high trust sample, the coefficient for pay cut (compared to downsizing) on affective commitment is not significant (estimate = -0.029, SE = 0.031, ns). The coefficient of pay cut (compared to downsizing) on affective commitment, on the other hand, is significantly negative in the low trust sample (estimate = -0.175, SE = 0.036, $p < 0.01$). These results indicate that the level of affective commitment of employees who survived downsizing is significantly higher than that of employees who had their pay cut only when the level of trust in management is low. In the case of high trust in management, no significant difference in the level of affective commitment was observed between employees who had their pay cut and employees who survived downsizing. Thus, the results indicate that cutting pay (compared to downsizing) has a less negative effect on affective commitment when the level of trust in management is high (compared to when the level of trust in management is low). Therefore, Hypothesis 4 is supported with affective commitment as the outcome variable.

==========
Insert Table 2D about here
==========

Study 2B: Methods

Overview and sample

In Study 2B, 2010 WageIndicator Survey (WIS) was analyzed. WIS is a voluntary online survey which contains information on working conditions (wages, benefits, etc.) of workers in over 50 countries around the world (for details of WIS, see Tijdens, van Zijl, Hughie-Williams, van Klaveren & Steinmetz, 2010). Datasets from 2006 to 2015 are now available in WIS[9]. In this study, only the 2010 WIS was analyzed given the limitations in time and budget. 2010 WIS was chosen among the other datasets because the economy in 2009

[9] *Although WIS has been conducted every year since 2006, it is not a longitudinal survey. The survey does not identify and track individuals between different survey years.*

was heavily impacted by the global financial crisis that started in the second-half of 2008 when Lehman Brothers has collapsed (Economist, 2013). Thus, it is likely that many organizations were pressured to reduce payroll costs in 2009. The survey questions in 2010 WIS reflected the events that occurred in 2009.

Only the participants who identified themselves as employees (excluding unemployed, house workers, students, retirees, owner of business, etc.) were included in the final sample. Given the voluntary nature of the sample, only the countries with more than 100 workers in both high and low trust conditions were included in the final sample in order to draw more reliable results. Excluding the missing data, the final sample for the analysis consisted of 15,840 employees in 17 countries. Detailed sample size by country and trust condition is shown in Table 2E.

==========
Insert Table 2E about here
==========

Measures

Job satisfaction. Job satisfaction was measured by asking how satisfied the participants were with their current job. Although this was a single-item measure, the practice of measuring job satisfaction with a single item has been reviewed by researchers as robust (Wanous, Reichers & Hudy, 1997).

Trust in management. Trust in management was measured by asking a participant if the participant trusts the management in the organization that the he or she works for. Participants that answered *yes* to this question were categorized as high trust and participants that answered *no* to this question were categorized as low trust.

Payroll cost reduction method: Pay cut. 2010 WIS asked participants if they received a pay raise in the previous year (2009). Participants who indicated that they have not received a pay

raise were categorized into the pay cut group.

As in Study 2A, the measure of cutting pay in this study also encompasses the case of pay freeze. 17 countries in the final sample all have recorded positive rates of inflation in 2009. Therefore, the measure reflects pay cut not only in "nominal" pay but also in "real" pay.

Payroll cost reduction method: Downsizing. 2010 WIS asked participants if organizations that they work for announced redundancies in past 12 months. Participants who answered *yes* to this question were coded as the survivors of downsizing.

Payroll cost reduction method: Neither pay cut nor downsizing. Participants who were not survivors of downsizing and did not have their pay cut were included in this group.

Payroll cost reduction method: Both pay cut and downsizing. Participants who were the survivors of downsizing *and* had their pay cut at the same time were included into this group. These employees were not again categorized either in pay cut or survivors of downsizing group. Thus, as in Study 2A, the four conditions (i.e., *pay cut*, *downsizing*, *neither pay cut nor downsizing* and *both pay cut and downsizing*) are mutually exclusive.

Control variables. Control variables were selected based on past studies examining job satisfaction (e.g. Judge & Kammeyer-Mueller, 2012; Weaver, 1978) and their availability in 2010 WIS. Control variables entered in the analysis model are shown in Appendix 2B. Individual (age, permanent status, gender, marital status, work hours, tenure and pay level), job (occupation) and organization (industry, sector and size) characteristics that may relate to either or both affective commitment and payroll cost reduction methods were included as controls as well.

Analysis model

As in Study 2A, hierarchical linear modeling (HLM) was utilized due to the multi-leveled structure (i.e. participants nested in countries) of the data (Hofmann, 1997). Two-level

HLM analysis was applied. The level-1 analysis models the relationship between individual/job/organization related variables (e.g., pay cut vs. downsizing, trust, and controls) and job satisfaction. The level-2 model was a country-level model. However, no other information at the country-level was provided in the dataset. Therefore, the level-2 model was a model only with a grand mean and a residual for the intercept in the level-1 analysis. As in other studies in this paper, the overall model represents the random intercept model. ICC(1) value for job satisfaction was 0.044[10]. HLM7 (Raudenbush et al., 2011) was used in the analysis. The equations used for the analysis are as follows.

(Level 1 Equation)

$$Job\ satisfaction_{ij} = \delta_{0j} + \delta_1 * Pay\ cut_{ij} + \delta_2 * Both\ pay\ cut\ and\ downsizing_{ij} + \delta_3 * Neither\ pay\ cut\ nor\ downsizing_{ij} + \delta_k * Controls_{ij} + \varepsilon$$

(Level 2 Equations)

$$\delta_{0j} = \zeta_{00} + \mu_{0j} \quad / \quad \delta_1 = \zeta_{10} \quad / \quad \delta_2 = \zeta_{20} \quad / \quad \delta_3 = \zeta_{30} \quad / \quad \delta_k = \zeta_{z0}$$

As in the model in Study 2A, *Pay cut*, *Both pay cut and downsizing*, and *Neither pay cut nor downsizing* in Level 1 Equation are dummy variables denoting 1 as employees in the variable name groups and 0 as otherwise. Therefore, the base for comparison in Level 1 Equation is the survivors of downsizing and δ_1 denotes the difference in the average level of job satisfaction between employees who had their pay cut and employees who survived downsizing. Split sample (high trust sample vs. low trust sample) HLM analysis was conducted to see whether the values of δ_1 in high and low trust samples differ in accordance with Hypotheses 4. For more intuitive

[10] *Although the ICC(1) value was not high, I used hierarchical linear modeling (HLM) method for the following two reasons. First, some portion (4.4%) of the variance in job satisfaction was explained by the country membership. Second, conducting an analysis utilizing the ordinary least squared (OLS) method controlling for country differences (i.e. fixed effect model) yielded same results in that coefficients that were significant in the fixed effect OLS model were also significant in the HLM model in the same direction.*

interpretation of the results, job satisfaction was standardized.

Study 2B: Results

Descriptive statistics

The means, standard deviations and correlations of the variables are shown in Table 2F. Mean values of pay cut (0.274), downsizing (0.184) and both pay cut and downsizing (0.187) indicate that 27.7 percent, 18.4 percent, and 18.7 percent of participants in the sample have experienced pay cut (including "real" pay cut or pay freeze), downsizing, and both pay cut and downsizing, respectively. In sum, 64.5 percent of the participants in the sample had their pay cut and/or survived downsizing in 2009. Although these numbers include the cases of pay freeze (or "real" pay cut), they indicate that payroll cost reduction was a widespread practice during 2009 in the 17 countries in the sample. Also notable is the difference in the correlations between payroll cost reduction methods and job satisfaction (*r* between pay cut and job satisfaction = -0.025, $p < 0.01$; *r* between downsizing and job satisfaction = 0.002, ns; *r* between both pay cut and downsizing and job satisfaction = -0.095, $p < 0.01$; *r* between neither pay cut nor downsizing and affective commitment = 0.099, $p < 0.01$).

==========
Insert Table 2F about here
==========

HLM Results

Hypothesis 4. The results of the split sample HLM analysis are presented in Table 2G. In the high trust sample, the coefficient for pay cut (compared to downsizing) on job satisfaction is not significant (estimate = -0.049, SE = 0.028, ns). However, the coefficient for pay cut (compared to downsizing) on job satisfaction is significantly negative in the low trust sample (estimate = -0.093, SE = 0.036, $p < 0.05$). These results indicate that the level of job satisfaction of employees who survived downsizing is significantly higher than that of employees who had their

pay cut only when the level of trust in management is low. When trust in management is high, there is no significant difference in the level of job satisfaction between employees who had their pay cut and employees who survived downsizing. Thus, the results indicate that cutting pay (compared to downsizing) has a less negative effect on job satisfaction when the level of trust in management is high (compared to when the level of trust in management is low). Therefore, Hypothesis 4 is supported for the case of job satisfaction as the outcome variable.

==========
Insert Table 2G about here
==========

Study 2: Discussion

The results in Studies 2A and 2B replicate the moderating effect of trust in management when comparing the effects of pay cut versus downsizing in maintaining work attitudes (affective commitment in Study 2A and job satisfaction in Study 2B) in a real work setting. The results in these studies address the generalizability issue raised in the limitations of Study 1.

Although the studies address generalizability concerns, some methodological concerns should be acknowledged. First, the interpretation of the results should be made with caution due to the cross-sectional nature of the data. Employees with high levels of work attitudes may be more likely to have higher performance and thus to be the survivors of downsizing rather than have their pay cut. As a result, the casual mechanism in this study can be reversed.

Second, omitted variable bias may also be a concern. Although 2011 WERS (Study 2A) and 2010 WIS (Study 2B) provided a reasonable number of controls that likely impact work attitudes and payroll cost reduction, it does not include all potential variables. For example, analysis models in both studies were not able to control the number of employees and pay amount that were reduced. Thus, the effect size estimated with these models may less precise due to these

omitted variables.

Third, the pay cut measure does not perfectly reflect the construct as it also encompasses the case of pay freezes. The data on pay cuts are extremely difficult to obtain (Lee & Rupp, 2007) and this is a common limitation in utilizing a secondary data source. In the future, researchers should establish a survey that is specifically intended to compare the effects of cutting pay and downsizing to overcome these limitations.

Fourth, a sampling error can also be an issue in Study 2B due to the participation in 2010 WIS being voluntary. Although I have only included datasets from countries that are reasonably large in sample sizes, these sub-samples in 2010 WIS may not adequately reflect the working populations of the countries involved.

Despite these limitations, the results in Studies 2A and 2B are in alignment with those of Study 1. The method used in Study 1 (within-subjects design experiment) complements the methodological limitations in Studies 2A and 2B.

General Discussion

Theoretical implications

The studies in this paper make some important contributions to the field of management. First, the studies establish a model of trust as a moderator in the relationship comparing the effects of cutting pay and downsizing on work attitudes. Past research on cutting pay and downsizing focuses on answering why these practices negatively affect employee attitudes (e.g. Brockner et al., 2004; Gilson et al., 2004; Lovett et al., 2008; Luthans & Sommer, 1999; Wagar, 1998) and lacks a theoretical guide to address for whom and when one method may be more or less effective than the other method in maintaining work attitudes. The current study utilizes expectancy theory (Vroom, 1964) and identifies trust in management as an important factor that can determine the relative effectiveness of the two methods.

Moreover, the studies also address how trust in management influences the relative effectiveness by showing that trust strengthens the pay-reduced employees' feelings of job security more so than those of employees who survived downsizing.

Second, the study also contributes to the literature on organizational change management in that the study demonstrates the importance in the fit between change content (i.e., cutting pay vs. downsizing) and situational factors (i.e., trust in management). Past organizational change studies highlight the importance of fit between individual characteristics and situational factors involved in a given change (e.g., Fugate, Prussia & Kinicki, 2012; Herold, Fedor & Caldwell, 2004; Jimmieson, Terry & Callan, 2004; Oreg & Sverdlik, 2011). However, less is known about the fit between change content and situational factors (Oreg, Vakola & Armenakis, 2011). The current study provides insight to this topic by demonstrating that the fit between the type of payroll cost reduction (change content: pay cut vs. downsizing) and situational factors (trust in management) play an important role in maintaining work attitudes.

Practical implications

The contribution of the studies in this paper can be extended to policy and practice. First, although not the main interest of the studies in this paper, the results indicate that downsizing better maintains the work attitudes of remaining employees than does cutting pay. Using split samples, no case was found where employees who had their pay cut exhibited higher level of work attitudes than survivors of downsizing (with the exception of affective commitment in Study 1). In all of the low trust samples, employees who survived downsizing exhibited higher level of work attitudes than employee who had their pay cut. The results are in alignment with the widely held concerns of practitioners that cutting pay would be more detrimental in managing work attitudes than downsizing (Bewley, 1998, 1999).

The studies in this paper, however, also demonstrate that cutting pay can be a feasible alternative to downsizing (in terms of maintaining work attitudes) when the level of trust in management is high. In high trust samples, there were no significant differences in the levels of work attitudes between employees who survived downsizing and employee who had their pay cut. Moreover, in Study 1, high-trust employees who had their pay cut exhibited higher levels of affective commitment than employees who survived downsizing. Therefore, for cutting pay to be a feasible alternative to downsizing, organizations should maintain high-trust relationships with their employees. The results highlight the importance of trust between employees and management in overcoming difficulties when wages and salaries of individuals need to be reduced.

Limitations and future studies

Although the studies in this paper provide meaningful implications, we should acknowledge some overall limitations. First, common method bias (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) may be a concern given that most of studies in this paper use a single data source. Even in Study 2A, where multiple data sources (i.e., employees and HR/labor relations managers) were utilized, the independent variable (i.e., pay cut) and dependent variable (i.e., affective commitment) were both collected from a single data source (i.e., only from employees). Therefore, the relationships that are observed in the studies may be stronger than would otherwise be observed. However, as the main objective in these studies is to "compare" the effects of pay cut and downsizing on the outcomes of interests rather than to "estimate" these effects, this may be less of a concern.

Second, although the theoretical model relies on expectancy theory (Vroom, 1964), studies in this paper only utilize the instrumentality factor in building the model. Future studies may also want to explore valence factors in expectancy theory to build a more

comprehensive model of pay cut vs. downsizing in maintaining work attitudes. For example, the relationship between the perception of relative advantage in pay-level and work attitudes may be strengthened when employees highly value pay. On the other hand, the relationship between perception of relative advantage in job security and work attitudes may be strengthened when employees highly value job security. Therefore, work values (Cable & Edwards, 2004) may also be an important moderator in the model from the valence perspective in expectancy theory (Vroom, 1964).

Finally, although the overall results indicate that downsizing does a better job than cutting pay at maintaining work attitudes of employees who remain in the organization, we must acknowledge that the findings in this paper do not necessarily suggest that downsizing is a "better" method than cutting pay for reducing payroll costs. The studies in this paper only investigate work attitudes as an outcome. There are other important organizational outcomes such as job-seeker attraction, corporate image and labor productivity. Additional studies comparing the consequences of cutting pay and downsizing on a number of organizational outcomes should be conducted to draw more comprehensive conclusions.

Conclusion

Though there are some limitations, the studies in this paper provide insight that trust in management among employees should be considered when predicting the relative advantages and disadvantages of cutting pay over downsizing for maintaining work attitudes. The results provide research-based answers questions regarding when organizations should downsize of cut pay. The current study also provides an alternative perspective (i.e., relative reward perspective) for studying payroll cost reduction methods and broadens the possibilities of future research on the topic of pay cut versus downsizing.

REFERENCES (PAPER 2)

Allen, T. D., Freeman, D. M., Russell, J. E., Reizenstein, R. C., & Rentz, J. O. 2001. Survivor reactions to organizational downsizing: Does time ease the pain?. ***Journal of Occupational and Organizational Psychology***, 74: 145−164.

Allen, N. J. and Meyer, J. P. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. ***Journal of Occupational Psychology***, 63:1–18.

Armstrong-Stassen, M. 1994. Coping with transition: A study of layoff survivors. ***Journal of Organizational Behavior***, 15(7): 597−621.

Bewley, T. F. 1998. Why not cut pay? ***European Economic Review***, 42: 459−490.

Bewley, T. F. 1999. ***Why wages don't fall during a recession***. Boston: Harvard University Press.

Bliese, P. D. 2000. Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), ***Multilevel theory, research, and methods in organizations***, 349−381. San Francisco: Jossey-Bass.

Brecht, K. (2014, December 30). After five years of recovery, US workers can expect to see raises in 2015. ***The Guardian***. Retrieved April 27, 2015, from http://www.theguardian.com/money/2014/dec/30/us-workers-salary-raises-2015.

Brockner, J., Spreitzer, G., Mishra, A., Hochwarter, W., Pepper, L., & Weinberg, J. 2004. Perceived control as an antidote to the negative effects of layoffs on survivors' organizational commitment and job performance. ***Administrative Science Quarterly***, 49: 76−100.

Bureau of Labor Statistics. (2015, March 11). Employer costs for employee compensation: December 2014. ***Economic News Release***. Retrieved April 27, 2015, from http://www.bls.gov/news.release/ecec.nr0.htm.

Byrne, R. M. J. 2005. ***The rational imagination***. Cambridge, MA: MIT Press.

Cable, D. M., & Edwards, J. R. 2004. Complementary and supplementary fit: A theoretical and empirical integration. ***Journal of Applied Psychology***, 89(5): 822–834.

Cammann, C., Fichman, M., Jenkins,D., & Klesh, J. 1983. Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis & C. Cammann (Eds.), ***Assessing organizational change: A guide to methods, measures and practices***, 71−138. New York: John Wiley.

Carsten, J. M. and Spector, P. E. 1987. Unemployment, job satisfaction, and employee turnover: A meta-analytic test of the Muchinsky model. ***Journal of Applied Psychology***, 72: 374–381.

Chambel, M. J., & Fortuna, R. 2015. Wage reduction of Portuguese civil servants and their attitudes: The psychological contract perspective. ***The International Journal of Human Resource Management***, 26(22): 2853−2871.

Cook, J., & Wall, T. 1980. New work attitude measures of trust, organizational commitment and personal need non-fulfillment. ***Journal of Occupational Psychology***, 53(1): 39–52.

Datta, D. K., Guthrie, J. P., Basuil, D., & Pandey, A. 2010. Causes and effects of employee downsizing: A review and synthesis. ***Journal of Management***, 36: 281–348.

Eagly, A. H., & Chaiken, S.1993. ***The psychology of attitudes***. Fort Worth, TX: Harcourt Brace Jovanovich.

The Economist. (2013, September 7). The origins of the financial crisis: Crash course. ***The Economist***. Retrieved December 17, 2014, from

http://www.economist.com/news/schoolsbrief/21584534-effects-financial-crisis-are-still-being-felt-five-years-article.

Eilam-Shamir, G., & Yaakobi, E. 2014. Effects of early employment experiences on anticipated psychological contracts. ***Personnel Review***, 43(4): 553−572.

Fiorito, J., Bozeman, D. P., Young, A., & Meurs, J. A. 2007. Organizational commitment, human resource practices, and organizational characteristics. ***Journal of Managerial Issues***, 186−207.

Fugate, M., Prussia, G. E., & Kinicki, A. J. 2012. Managing employee withdrawal during organizational change: The role of threat appraisal. ***Journal of Management***, 38(3): 890−914.

Gartrell, C. D., & Paille, B. E. 1997. Wage cuts and the fairness of pay in a worker-owned plywood cooperative. ***Social Psychology Quarterly***, 103−117.

Gerhart, B., Rynes, S. L., & Fulmer, I. S. 2009. Pay and performance: Individuals, groups, and executives. ***The Academy of Management Annals***, 3: 251−315.

Gilson, C., Hurd, F., & Wagar, T. 2004. Creating a concession climate: the case of the serial downsizers. ***The International Journal of Human Resource Management***, 15(6): 1056−1068.

Gleicher, F., Boninger, D. S., Strathman, A., Armor, D., Hetts, J., & Ahn, M. 1995. With an eye toward the future: The impact of counterfactual thinking on affect, attitudes, and behavior. In N. J. Roese & J. M. Olson (Eds.), ***What might have been: The social psychology of counterfactual thinking***: 283−304. Mahwah, NJ: Lawrence Erlbaum Associates Inc.

Gong, Y., Law, K. S., Chang, S., & Xin, K. R. 2009. Human resources management and firm performance: The differential role of managerial affective and continuance commitment. ***Journal of Applied Psychology***, 94: 263−275.

Goodman, L. A. 1960. On the exact variance of products. ***Journal of the American Statistical Association***, 55(292): 708-713.

Greenberg, J. 1989. Cognitive reevaluation of outcomes in response to underpayment inequity. ***Academy of Management Journal***, 32(1): 174−184.

Greenberg, J. 1990. Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. ***Journal of Applied Psychology***, 75(5): 561−568.

Hackett, R. D. and Guion, R. M. 1985. A reevaluation of the absenteeism-job satisfaction relationship. ***Organizational Behavior and Human Decision Processes***, 35: 340–381.

Herold, D. M., Fedor, D. B., & Caldwell, S. D. 2007. Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change. ***Journal of Applied Psychology***, 92(4): 942−951.

Hobson, J. (2009, February 16). Would you like a pay cut or layoff? ***Marketplace***. Retrieved October 6, 2012, from http://www.marketplace.org/topics/business/fallout-financial-crisis/would-you-pay-cut-or-layoff-0.

Hofmann, D. A. 1997. An overview of the logic and rationale of hierarchical linear models. ***Journal of Management***, *23*: 723–744.

Jimmieson, N. L., Terry, D. J., & Callan, V. J. 2004. A longitudinal study of employee adaptation to organizational change: The role of change-related information and change-related self-efficacy. ***Journal of Occupational Health Psychology***, 9(1): 11−27.

Judge, T. A., & Kammeyer-Mueller, J. D. 2012. Job attitudes. ***Annual Review of Psychology***, 63: 341–367.

Judge, T. A., Thoresen, C. J., Bono, J. E. and Patton, G. K. 2001. The job satisfaction–job performance relationship: A qualitative and quantitative review. ***Psychological Bulletin***, 127: 376–407.

Koys, D. J. 2001. The effects of employee satisfaction, organizational citizenship behavior, and turnover on organizational effectiveness: A unit-level, longitudinal study. ***Personnel Psychology***, 54(1): 101−114.

Krull, J. L., & MacKinnon, D. P. 1999. Multilevel mediation modeling in group-based intervention studies. ***Evaluation Review***, 23(4): 418-444.

Krull, J. L., & MacKinnon, D. P. 2001. Multilevel modeling of individual and group level mediated effects. ***Multivariate Behavioral Research***, 36: 249−277.

Lee, D., & Rupp, N. G. 2007. Retracting a gift: How does employee effort respond to wage reductions?. ***Journal of Labor Economics***, 25: 725−761.

Levinson, H., Price, C, Munden, K., Mandl, H., & Solley, C. 1962. **Men*, management, and mental health.*** Cambridge, MA: Harvard University Press.

Lewin, D. (2009, January 29). Cut pay, not people. ***The Wall Street Journal***. Retrieved October 6, 2012, from http://online.wsj.com/article/SB123326826586730619.html.

Locke, E. 1976. The nature and causes of job satisfaction. In M. D. Dunrette (Eds.), ***Handbook of industrial and organizational psychology***, 1297–1350. Chicago: Rand McNally.

Loewenstein, G., & Sicherman, N. 1991. Do workers prefer increasing wage profiles?. ***Journal of Labor Economics***, 9: 67−84.

Lovett, S., Coyle, T., Banerjee, G., & Hardebeck, S. 2008. Measuring managerial effectiveness in handling pay cuts. ***Journal of Applied Management and Entrepreneurship***, 13(4): 23−46.

Luthans, B. C., & Sommer, S. M. 1999. The impact of downsizing on workplace attitudes differing reactions of managers and staff in a health care organization. ***Group & Organization Management***, 24: 46−70.

Marsden, P. V., Kalleberg, A. L., & Cook, C. R. 1993. Gender differences in organizational commitment influences of work positions and family roles. ***Work and Occupations***, 20(3): 368–390.

Mathieu, J. E., & Zajac, D. M. 1990. A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. ***Psychological Bulletin***, 108: 171–194.

McCauley, D. P., & Kuhnert, K. W. 1992. A theoretical review and empirical investigation of employee trust in management. ***Public Administration Quarterly***, 265–284.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. 2002. Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. ***Journal of Vocational Behavior***, 61(1): 20−52.

Morrison, E. W., & Robinson, S. L. 1997. When employees feel betrayed: A model of how psychological contract violation develops. ***Academy of Management Review,*** 22: 226–256.

Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment. ***Journal of Vocational Behavior***, 14: 224−247.

Muthen, L. K., & Muthen, B. O. 2010. ***Mplus: The comprehensive modeling program for applied researchers: User's guide***. Los Angeles: Muthen & Muthen.

Omer, S. (2008, December 30). Would you take a pay cut to save jobs? ***NBC News***. Retrieved November 4, 2013, from http://www.nbcnews.com/id/28198637/#.UnhuvpS_d3Z.

Oreg, S., & Sverdlik, N. 2011. Ambivalence toward imposed change: The conflict between dispositional resistance to change and the orientation toward the change agent. ***Journal of Applied Psychology***, 96(2): 337–349.

Oreg, S., Vakola, M., & Armenakis, A. 2011. Change recipients' reactions to organizational change: A 60-year review of quantitative studies. ***The Journal of Applied Behavioral Science***, 47(4): 461–524.

Organ, D. W. 1988. ***Organizational citizenship behavior: The good soldier syndrome***. Lexington, MA: Lexington Books.

Organ, D. W. and Konovsky, M. 1989. Cognitive versus affective determinants of organizational citizenship behavior. ***Journal of Applied Psychology***, 74: 157–164.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y. and Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. ***Journal of Applied Psychology***, 88, 879–903.

Rampell, C. (2008, November 18). Reader feedback: Why layoffs instead of wage cuts? ***Economix***. Retrieved April 30, 2013, from http://economix.blogs.nytimes.com/2008/11/18/reader-feedback-why-layoffs-instead-of-wage-cuts/.

Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R. T., & du Toit, M. 2011. ***HLM 7***. Lincolnwood, IL: Scientific Software International Inc.

Roese, N. J., & Olson, J. M. (Eds.). 1995a. ***What might have been: The social psychology of counterfactual thinking***. Mahwah, NJ: Lawrence Erlbaum Associates Inc.

Roese, N. J., & Olson, J. M. 1995b. Counterfactual thinking: A critical overview. In N. J. Roese & J. M. Olson (Eds.), ***What might have been: The social psychology of counterfactual thinking***: 1−56. Mahwah, NJ: Lawrence Erlbaum Associates Inc.

Rousseau, D. M. 1989. Psychological and implied contracts in organizations. **Employee Responsibilities *and Rights Journal,*** 2: 121−139.

Rousseau, D. M. 1995. ***Psychological contracts in organizations: Understanding written and unwritten agreements***. Thousand Oaks, CA: SAGE Publications.

Rousseau, D. M., & Greller, M. M. 1994. Human resource practices: Administrative contract makers. ***Human Resource Management,*** 33: 385–401.

Rousseau, D. M., & McLean Parks, J. 1993. The contracts of individuals and organizations. In L. L. Cummings & B. M. Stow (Eds.), ***Research in organizational behavior,*** vol. 15: 1−47. Greenwich, CT: JAI Press.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. 1998. Not so different after all: A cross-discipline view of trust. ***Academy of Management Review***, 23(3): 393−404.

Rousseau, D. M., & Tijoriwala, S. A. 1998. Assessing psychological contracts: Issues, alternatives and measures. ***Journal of organizational Behavior***, 19: 679−695.

Schein, E. H. 1965. **Organizational psychology.** Englewood Cliffs, NJ: Prentice Hall.

Sims, R. R. 1994. Human resource management's role in clarifying the new psychological contract. **Human Resource *Management,*** 33: 373−382.

Smith, J. C. 2002. Pay cuts and morale: a test of downward nominal rigidity. ***Warwick Economic Research Papers***.

Smith, P. C., Kendall, L. M., & Hulin, C. 1969. ***The measurement of satisfaction in work and behavior***. Chicago: Raud McNally.

Snorradottir, A., Vilhjalmsson, R., Rafnsdottir, G. L., & Tomasson, K. 2013. Financial crisis and collapsed banks: Psychological distress and work related factors among surviving

employees−A nation-wide study. ***American Journal of Industrial Medicine***, 56(9): 1095−1106.

Soubbotina, T. P., & Sheram, K. A. 2000. ***Beyond economic growth: Meeting the challenges of global development***. Washington D.C.: The World Bank.

Spector, P. E. 1985. Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. ***American Journal of Community Psychology***, 13(6): 693−713.

Strauss, G. (2014, September 8). 2015 pay raises expected to be 3% next year. ***USA Today***. Retrieved April 27, 2015, from http://www.usatoday.com/story/money/business/2014/09/07/2015-pay-raises-should-average-3/15136423/.

Taylor, J. C., & Bowers, D. G. 1974. ***The survey of organizations: Towards a machine scored, standardized questionnaire***. Ann Arbor, MI: University of Michigan, Institute for Social Research.

Tijdens, K., van Zijl, S., Hughie-Williams, M., van Klaveren, M., & Steinmetz, S. 2010. ***Codebook and explanatory note on the WageIndicator dataset.*** Retrieved November 10, 2016, from http://www.wageindicator.org/main/documents/publicationslist/publications-2010/codebook-and-explanatory-note-on-the-wageindicator-dataset.pdf.

Travaglione, A., & Cross, B. 2006. Diminishing the social network in organizations: Does there need to be such a phenomenon as 'survivor syndrome' after downsizing?. ***Strategic Change***, 15: 1−13.

Vroom, V. H. 1964. ***Work and motivation***. New York: Wiley.

Wagar, T. H. 1998. Exploring the consequences of workforce reduction. ***Canadian Journal of Administrative Sciences***, 15(4): 300−309.

Wanous, J. P., Reichers, A. E., & Hudy, M. J. 1997. Overall job satisfaction: How good are single-item measures?. ***Journal of Applied Psychology***, 82: 247–252.

van Wanrooy, B. V., Bewley, H., Bryson, A., Forth, J., Freeth, S., Stokes, L., & Wood, S. 2013. ***The 2011 workplace employment relations study: First findings.*** Retrieved April 6, 2016, from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/336651/bis-14-1008-WERS-first-findings-report-fourth-edition-july-2014.pdf.

Warr, P., Cook, J., & Wall, T. 1979. Scales for the measurement of some work attitudes and aspects of psychological well-being. ***Journal of Occupational Psychology***, 52(2): 129−148.

Weaver, C. N. 1978. Sex differences in the determinants of job satisfaction. ***Academy of Management Journal***, 21: 265–274.

Weiss, D., Dawis, R., Emgland, G., & Lofquist, L. 1967. ***Manual for the Minnesota Satisfaction Questionnaire***. Minneapolis: University of Minnesota, Industrial Relations Center.

PAPER 3

SECTORAL DIFFERENCE IN COMPARING THE EFFECTS OF PAY CUTS AND DOWNSIZING ON WORK ATTITUDES: A FIT BETWEEN CHANGE CONTENT AND SITUATIONAL FACTOR

Abstract

Studies in this paper compare the effects of different types of change (cutting pay vs. downsizing) on work attitudes (i.e., affective commitment and job satisfaction) in the context of payroll cost (i.e., cost of wages and salaries) reduction. The studies also examine the moderating effect of sector (private sector vs. public sector) in this comparison. Analyses of 4,359 Irish workers (Study 1) reveal no overall difference in the levels of affective commitment and job satisfaction between employees whose pay was cut and employees who survived downsizing. However, this comparison is moderated by sector. In the private sector, survivors of downsizing exhibited higher levels of affective commitment and job satisfaction relative to employees whose pay was cut. In the public sector, on the other hand, there was no significant difference in the levels of affective commitment and job satisfaction between employees whose pay was cut and employees who survived downsizing. Subsequent studies (Studies 2 and 3) examine a possible psychological mechanism that drives this difference. In Study 2, public sector employees exhibited lower levels of pay work value than private sector employees. In Study 3, the negative indirect effect of pay cuts (compared to downsizing) on work attitudes through pay-level satisfaction was weaker in the public sector than in the private sector. Studies in this paper highlight the importance of fit between change type (cutting pay vs. downsizing) and situational factors (private sector vs. public sector) for maintaining work attitudes (affective commitment and job satisfaction) of employees in the context of payroll cost reduction.

Keywords: Payroll cost reduction, pay cuts, pay reduction, downsizing, layoff, work attitudes, affective commitment, job satisfaction, work sector, private sector, and public sector

Introduction

As change becomes increasingly common – and necessary – in today's workplaces, a key concern for organizations is how to manage change in ways that lead to positive and beneficial outcomes. Given the importance of committed and satisfied employees as firm specific resources (Gong, Law, Chang & Xin, 2009) and drivers of organizational performance (Arthur, 1994), the question of how to better manage work attitudes of employees under change is a vital one for management. Reflecting this interest, past research on organizational change has examined various factors such as individual characteristics (e.g., Judge, Thoreson, Pucik & Welbourne, 1999; Kirton & Mulligan, 1973; Lau & Woodman, 1995), change processes (e.g., Caldwell, Herold & Fedor, 2004; Miller, Johnson & Grau, 1994; Sagie & Koslowsky, 1994; Schweiger & Denisi, 1991), justice perceptions (e.g., Daly & Geyer, 1994; Paterson & Cary, 2002; Rodell & Colquitt, 2009), leadership (e.g., Bommer, Rich & Rubin, 2005; Furst & Cable, 2008; Herold, Fedor, Caldwell & Liu, 2008; Oreg & Berson, 2011) and fit between individual characteristics and situational factors (e.g., Fugate, Prussia & Kinincki, 2012; Herold, Fedor & Caldwell, 2007; Jimmieson, Terry & Callan, 2004; Oreg & Sverdlik, 2011) that affect employees' attitudes toward change.

The majority of these studies, however, examine factors that affect work attitudes of employees under a given change. As a result, less is known about how change types are linked with individuals' response to change (Oreg, Vakola & Armenakis, 2011). Although a few studies have considered multiple change types (e.g., Caldwell et al., 2004; Herold et al., 2007; Judge et al., 1999; Kim, Song & Lee, 2013; Rafferty & Simons, 2006; Sagie & Koslowsky, 1994), they tend to only view multiple changes as a continuum of a single situational factor (e.g., change intensity/volatility) or as a factor that should be controlled. Thus, there exists a need to focus on the varying effects of different types of change.

In the current study, I address this gap in the literature by comparing the effects of different

types of change (i.e., cutting pay and downsizing) on work attitudes (i.e., affective commitment and job satisfaction) in the context of payroll cost (i.e., cost of wages and salaries) reduction. I also examine the moderating effect of sector (private sector vs. public sector) in this comparison. Payroll cost reduction activities of organizations have become much more prevalent in recent years (WorldatWork, 2010, 2011, 2012), and cutting pay and downsizing are often considered the two most relevant methods in reducing payroll costs (Hobson, 2009; Lewin, 2009; Omer, 2008; Rampell, 2008; Zingheim & Schuster, 2002). As a result, there has been an increase in interest by both practitioners (e.g. Buhayar, 2009; Lewin, 2009) and researchers (e.g. Datta, Guthrie, Basuil, & Pandey, 2010) as to which payroll cost reduction method produces superior outcomes – including employees' favorable work attitudes.

The study makes contributions to multiple fields in management. First, the study makes a contribution to the field of organizational change by comparing the effects of different types of change. Second, the study contributes to the field of payroll cost reduction methods by incorporating sector as a moderator in the comparison between cutting pay and downsizing and their effect on work attitudes. Research examining moderating factors in this comparison is extremely limited, and the existing study only examines training as the moderator (Yoon, 2014). Lastly, the study makes a contribution to the field of public administration by providing implications for the debate between proponents of New Public Management (NPM) movement (e.g., Barzelay, 2001; Osborne & Gaebler, 1992) and public service motivation (PSM) theorists (e.g., Frederickson & Hart, 1985; Perry & Hondeghem, 2008; Perry & Porter, 1982; Perry & Wise, 1990). Specifically, the results provide insight on whether a sectoral difference exists (argument by proponents PSM) or not (argument by proponents of NPM) in managing work attitudes in the context of payroll cost reduction. In other words, this study addresses whether payroll cost reduction should be managed differently in the private versus public sector to lead to the most

positive work attitudes.

Theoretical Background And Hypothesis

Payroll cost reduction methods

An organization, at a given point in time, performs tasks by using a given quantity of labor for a given wage (i.e., pay rate). Therefore, at a given point in time, the payroll costs (i.e., cost of wages and salaries) of an organization is the function of the quantity of workers that the organization employs and pay rates of its workers.

Payroll costs, therefore, can be reduced by one or both of the following methods: by reducing average pay rates through cutting pay of some or all workers (henceforth, "pay cuts" or "cutting pay"), or by reducing the number of workers in the organization through layoffs, buyouts and other measures (henceforth, "downsizing"). Compensation practitioners (e.g. Zingheim & Schuster, 2002) and the media alike (Hobson, 2009; Lewin, 2009; Omer, 2008; Rampell, 2008) often view these two methods (i.e., cutting pay and downsizing) as alternatives in reducing payroll costs.

Compared subjects in the study

In this study, I will compare the work attitudes of employees whose pay is cut and those of downsizing survivors. After a payroll cost has been reduced through cutting pay and/or downsizing, an organization has to perform tasks with employees who remain but are affected by these payroll cost reduction measures. Thus, the main research question of this study is which group of employees – employees who are affected by pay cuts or those who survived the process of downsizing – exhibit higher (or lower) levels of positive (or negative) employee attitudes following payroll cost reduction. Additionally, I examine whether this difference is moderated by sector. As such, the study is less concerned with the work attitudes of employees whose pay is not cut in organizations that implemented pay cuts and employees who are dismissed in organizations that

implemented downsizing. Thus, henceforth, "(work attitudes of) employees" will be referring to (work attitudes of) employees whose pay is cut in pay-reduced organizations and to (work attitudes of) survivors of downsizing in downsized organizations.

Basic theoretical framework

People form attitudes toward a subject by assessing the positive or negative impact of the subject on themselves (Eagly & Chaiken, 1993). In alignment with this argument, various studies in the change management literature demonstrate that the anticipated benefits and costs of the outcomes of change are predictors of employees' work attitudes once change is implemented (e.g., Armenakis, Bernerth, Pitts, & Walker, 2007; Ashford, 1988; Coyle-Shapiro, 2002; Gaertner, 1989; Holt, Armenakis, Feild & Harris, 2007; Hornung & Rousseau, 2007; Miller & Monge, 1985; Peach, Jimmieson, & White, 2005; Wanberg & Banas, 2000). As a result, a change can lead to a decrease in *favorable work attitudes* (henceforth, "work attitudes") toward the change itself or the change initiator when it is perceived as a threat to various values that employees pursue through their work (Fugate et al., 2012).

Work values refer to what an individual desires, views as important, and hopes to achieve in work (Kalleberg, 1977; Locke, 1976). Work values act as reference points that an individual utilizes in selecting appropriate work-related goals and behaviors (Lyons, Duxbury & Higgins, 2006). Studies propose various typologies of work values, such as *extrinsic* (material-related), *intrinsic*, *prestige* (status-related), *altruistic*, *social* (relationship-related), *fairness,* and *leisure* (freedom-related) values (e.g. Cennamo & Gardner, 2008; Keller, Bouchard, Arvey, Segal & Dawis, 1992; Lyons et al., 2006; Meglino, Ravlin & Adkins, 1989; Phillips & Freedman, 1985; Ravlin & Meglino, 1987; Twenge, Campbell, Hoffman & Lance, 2010).

Among the various work values identified in earlier studies, extrinsic and altruistic values are important in understanding the differential effects of pay cuts and downsizing on work attitudes.

Extrinsic work value refers to the degree to which individuals value material and instrumental aspects in work, such as pay and job security (Elizur, 1984). In contrast, altruistic work value refers to the degree to which individuals desire to make contributions to society and help others through work (Elizur, 1984).

Both pay cuts and downsizing may threaten extrinsic work value and lead to a decrease in work attitudes. In the case of pay cuts, pay of employees is reduced and therefore threatens pay work value of employees. Similarly, downsizing reduces the available jobs within the organization. Should employees assume that the organization would make a similar decision in the future, survivors of downsizing may feel that their job is less protected (or more threatened). Thus, downsizing can threaten job security work value of employees.

In addition to threatening job security, downsizing can also threaten the altruistic work value of employees. This is because downsizing can be viewed as an act of preserving the pay levels of some employees at the cost of other employees' jobs. In alignment with this argument, downsizing is often viewed as a "brutal" (or "less humane") method that organizations utilize to overcome financial difficulties (e.g. Gracon & Clark, 1994; Zingheim & Schuster, 2002). Additionally, studies show that survivors of downsizing report higher levels of guilt than their counterparts in non-downsizing conditions (Brockner, Davy & Carter, 1985; Brockner, Greenberg, Brockner, Bortz, Davy & Carter, 1986).

In sum, we can expect that both pay cuts and downsizing lead to decreases in work attitudes by threatening work values of employees. Cutting pay threatens pay work value while downsizing threatens job security and altruistic work values.

Predicting which of the two cost reduction methods is less (or more) detrimental, however, is difficult. Cutting pay, compared with downsizing, reduces the pay level of employees and may be less effective in maintaining employees' pay-related perceptions (e.g., psychological contract

fulfillment in pay and pay-level satisfaction). Downsizing, by contrast, can threaten employees' job security-related perceptions (e.g., psychological contract fulfillment in job security and job security satisfaction) and altruistic motives. Although pay can be a key motivator in work settings (Gerhart & Rynes, 2003; Rottenberg, 1956), job security is often valued more than pay, unless pay is particularly low (Library Worklife, 2009; Omer, 2008; Taylor et al., 2012). Moreover, studies demonstrate that value congruence, especially in terms of altruistic work value, may be an important factor in sorting of employees (e.g., Frank & Lewis, 2004; Karl & Sutton, 1998; Lewis & Frank, 2002; Lyons et al., 2006). As a result, it is not clear which cost reduction method would have a more or less detrimental effect on work attitudes. Indeed, extant empirical findings are mixed (Fiorito, Bozeman, Young & Meurs, 2007; Snorradottir, Vilhjalmsson, Rafnsdottir & Tomasson, 2013). For example, employees in the United States whose pay was cut exhibited lower levels of commitment than those of downsizing survivors (Fiorito et al., 2007)[11]. However, in a study of bank employees in Iceland, employees whose pay was cut exhibited lower levels of stress than survivors of downsizing (Snorradottir et al., 2013)[12].

Despite these conceptual difficulties, we can model when the difference in the effects of pay cuts and downsizing on work attitudes is more or less in favor of the one method over the other. This is because there may be situational differences in work values (e.g., sectoral difference: Lyons et al., 2006; national difference: Ralston, Holt, Terpstra & Kei-Cheng, 1997). As a result, we can expect a greater decrease in work attitudes after pay cuts when the particular values pursued by employees in pay-reduced organizations are threatened. In contrast, we can anticipate a greater decrease in work attitudes after downsizing when the values pursued by employees in downsized

---

[11] *In this study, the coefficient of pay cut in the ordinary least square (OLS) model predicting organizational commitment was more negative than that of downsizing. However, the study did not report standard errors of the coefficients and statistical significance of the difference could not be inferred.*

[12] *In this study, the coefficient of downsizing in the OLS model predicting psychological distress was more positive than that of pay cut. However, the 95 percent confidence interval of the two coefficients overlapped.*

organizations are threatened. Because the current study aims to examine sectoral differences in the effects of pay cuts and downsizing, therefore, the sectoral differences in work values that these two methods threaten (i.e., pay, security, and altruistic work value) will be reviewed in the following section.

Sectoral difference in work values

Extrinsic (pay and job security) work values. Previous studies comparing private and public sectors have repeatedly demonstrated that employees in the private sector value higher pay more than their counterparts in the public sector (e.g., Buelens & Van den Broeck, 2007; Frank & Lewis, 2004; Houston, 2000; Karl & Sutton, 1998; Khojasteh, 1993; Lewis & Frank, 2002; Newstrom, Reif & Monczka, 1976; Rainey, 1982; Rawls, Ullrich & Nelson, 1975). By contrast, past studies have shown mixed results regarding job security. While some studies demonstrate that public sector employees value job security more than private sector employees (e.g., Houston, 2000), other studies show that workers in the public sector actually value job security less than the workers in the private sector (e.g., Khojasteh, 1993; Newstrom et al., 1976) or that no significant sectoral difference exists (e.g. Frank & Lewis, 2004; Karl & Sutton, 1998; Lewis & Frank, 2002; Rawls et al.,1975). Therefore, regarding extrinsic work values, past studies only confirm that employees in the private sector value high pay more than their counterparts in the public sector.

Altruistic work values. In contrast, past studies comparing the private and public sectors have consistently reported that workers in the public sector value altruistic motives more than their counterparts in the private sector (Frank & Lewis, 2004; Karl & Sutton, 1998; Lewis & Frank, 2002; Lyons et al., 2006). Although there are some studies showing that this sectoral difference decreases as the tenure of employees increases (e.g., Blau, 1960; Buurman, Delfgaauw, Dur & Van den Bossche, 2012; De Cooman et al., 2009; Moynihan & Pandey, 2007; Van Maanen, 1975), past studies indicate that, overall, workers in the public sector value altruistic motives more than

workers in the private sector.

Hypothesis development

We can therefore imagine that the strength of the negative effects of pay cuts (to employees whose pay is cut) and downsizing (to survivors) on work attitudes differ by sector (public vs. private). This is because pay cuts can be more threatening to pay work value, which are more important to private sector employees, on average, than they are to their counterparts in the public sector. On the other hand, downsizing can be more threatening to altruistic work values which are more important to public sector employees, on average, than they are to their counterparts in the private sector. Therefore, the negative effect of pay cuts on work attitudes, compared to the negative effect of downsizing, may be stronger in the private sector than in the public sector. Similarly, we might expect that the negative effect of downsizing on work attitudes, compared to the negative effect of cutting pay, is stronger in the public sector than in the private sector.

Although we cannot precisely predict which type of employees (i.e., pay-reduced employees or downsizing survivors) demonstrate higher or lower levels of work attitudes by sector, we can anticipate that the difference in the levels of work attitudes between the two groups be less in favor of employees whose pay is cut in the private sector than in the public sector and less in favor of downsizing survivors in the public sector than in the private sector. Therefore, I hypothesize as follows.

> ***Hypothesis 1:*** *The comparison in the effects of payroll cost reduction method (cutting pay vs. downsizing) on work attitudes is moderated by sector (private vs. public), such that cutting pay (compared to downsizing) has a greater, more negative effect on work attitudes in the private (compared to the public) sector and downsizing (compared to cutting pay) has a greater, more negative effect on work attitudes in the public (compared to the private) sector.*

Study 1: Method

Overview and sample

The study uses the 2009 National Workplace Survey (NWS) in Ireland. The 2009 NWS surveyed 5,110 employees in the private and public sector (agriculture industry excluded) in Ireland from March to June in 2009 via telephone. The response rate was 50 percent. Further detail about the survey can be found in O'Connel et al. (2010). Respondents who were not directly employed by the organization for which they work (i.e., agency workers, n = 77) were excluded from the analyses. Excluding cases in which data about the study variables were missing led to the exclusion of 674 cases (13.7%), leaving a final sample of 4,359 employees.

Measures

Work attitudes. Attitudes of employees toward their organizations and toward their jobs were examined in this study. Payroll cost reduction (i.e., pay cut or downsizing) influences attitudes of employees toward their organizations because organizations may be perceived as the initiators of change. Moreover, payroll cost reduction can also influence attitudes of employees toward their jobs since a job can be an important link that connects the employee to the organization. In accordance with this argument, various measurements of job attitudes (e.g., job satisfaction) not only measure facets of the job itself but also measure other organization-related facets such as the work environment and relationships with coworkers and managers (e.g., Smith, Kendall & Hulin, 1969; Taylor & Bowers, 1974; Warr, Cook & Wall, 1979; Weiss, Dawis, England & Lofquist, 1967).

Affective commitment was used to examine attitudes of employees toward their organizations. Affective commitment refers to an emotional attachment to an organization that the employee is the member of, involved in, or identifies with (Allen & Meyer, 1990; Gong et al., 2009; Mowday, Steers, & Porter, 1979). Affective commitment has been examined extensively in the literature due to its positive relationships with individual-level outcomes (e.g., job performance and

organizational citizenship behavior: Meyer, Stanley, Herscovitch & Topolnytsky, 2002) as well as organizational-level outcomes (e.g., organizational performance: Gong et al., 2009). The affective commitment of a given employee was measured by asking an employee the extent to which he or she agreed or disagreed (4 point scale) with the following three statements: "I am proud to be working for this organization", "My values and the organization's values are very similar", and "I feel little loyalty to the organization that I work for (reverse coded)" ($\alpha = 0.712$). The measure incorporates items from Mowday et al. (1979).

Job satisfaction was used to examine employee attitudes toward their jobs. Job satisfaction refers to an assessment or appraisal of an individual's job or job experiences (Locke, 1976). Job satisfaction also has been examined extensively in the literature due to its significant relationships with important job-related outcomes such as job performance (Judge, Thoresen, Bono & Patton, 2001), organizational citizenship behavior (Organ & Konovsky, 1989), absenteeism (Hackett & Guion, 1985) and turnover (Carsten & Spector, 1987). The job satisfaction of a given employee was measured by asking an employee the extent to which he or she agreed or disagreed (4 point scale) with the following statement: "In general, I am satisfied with my present job." Measuring job satisfaction through a single-item measure has been reviewed as relatively robust (Wanous, Reichers & Hudy, 1997).

Payroll cost reduction: Pay cut. NWS asked respondents whether their hourly pay rate increased a lot, increased a little, did not change, decreased a little, or decreased a lot over the last two years of employment with their current job. The survey asked respondents to only think back to just after they started their current job (if they had changed job within last two years). Respondents who selected either *"decreased a little"* or *"decreased a lot"* were coded as employees whose pay was cut. The measure reflects the reduction in nominal pay rather than real pay.

Inflation rate in Ireland in 2009 was negative (-4.5 percent[13]) and the answer choice *"not changed"* does not reflect reduction in real pay and was not included in the measure of pay cut.

Payroll cost reduction: Downsizing. NWS asked respondents whether there was an overall reduction in staff numbers in their workplace over the last two years. The survey asked respondents to only think back to just after they started their current job if they had changed job within last two years. Respondents who answered yes to this question were coded as survivors of downsizing.

Payroll cost reduction: Neither pay cut nor downsizing. Individuals whose pay was not cut and who were not survivors of downsizing were included in this group.

Payroll cost reduction: Both pay cut and downsizing. Individuals whose pay was cut and who were survivors of downsizing at the same time were included in this group. These individuals were not again coded as either employees whose pay was cut or as survivors of downsizing. Therefore, the four payroll cost reduction conditions (i.e. *pay cut*, *downsizing*, *both pay cut and downsizing*, and *neither pay cut nor downsizing*) are mutually exclusive.

Private vs. Public sector. NWS has categorized respondents into three sector groups: private, public and commercial semi-state sector. I ran two separate analyses – one analysis with commercial semi-states included in the public sector and another analysis with commercial semi-states included in the private sector – for all the estimations of the relationships of interests in this study. The two analyses yielded similar results; the significance and direction of all the coefficients of interests were the same. Thus, only the results for the analysis with commercial semi-states included in the public sector will be reported.

Controls. The control variables were chosen based on past research related to employee commitment (e.g., Judge & Kammeyer-Mueller, 2012; Mathieu & Zajac, 1990) and job satisfaction

[13] *From World Bank, http://data.worldbank.org/indicator/.*

(e.g., Judge & Kammeyer-Mueller, 2012; Weaver, 1978) (the two main dependent variables in this study), as well as their availability in NWS. Detailed explanations of the control variables are in the Appendix 3A. Three important control variables are pay level, organization size, and income level. Although NWS does not report the pay amount (in the case of pay cut) or number of employees (in the case of downsizing) reduced, it does report the hourly pay rate of employees and the size of organization at the time of the survey (2009, after the event of cutting pay or downsizing). The hourly pay rate is controlled, as individual's pay level after his or her pay is cut may influence the relationship between pay cuts and work attitudes. For example, if an employee's pay level is still very high after his or her pay is cut, the event may only have a small effect on the work attitude of the employee. In the case of downsizing, organization size is an important control variable because downsizing can be more or less salient depending on the size of the organization for which the individual works. For example, individuals in small organizations may develop more personal relationships with their colleagues than the individuals in large organizations; witnessing colleagues lose their jobs can lead to the development of stronger negative feelings toward their organizations and jobs. On the other hand, individuals in large organizations may be less affected if the subjects of downsizing are distant in terms of physical working distance and job functions. Lastly, the overall income level of an individual was controlled in addition to the hourly pay level. We can expect that the higher the income level of an individual, independent of the employment relationship with the current organization, the less his or her work attitudes will be affected by payroll cost reduction measures.

Analysis model

Ordinary least square (OLS) method was applied in analyzing the data.

(Equation 1)

$$Work\ attitude = \beta_0 + \beta_1 * Pay\ cut + \beta_2 * Both\ pay\ cut\ and\ downsizing$$

$$+ \beta_3 * \textit{Neither pay cut nor downsizing} + \beta_4 * \textit{Private sector}$$

$$+ \beta_i * \textit{Controls} + \varepsilon_0$$

First, the significance of β_1 in the above OLS Equation 1 was examined, where *Pay cut*, *Both pay cut and downsizing*, and *Neither pay cut nor downsizing* are dummy variables denoting 1 as individuals categorized into the variable name groups and 0 as otherwise. Therefore, the comparison group in this equation is the individuals in the *Downsizing* group (i.e., survivors of downsizing), and β_1 denotes the difference in the average level of work attitudes (i.e., affective commitment and job satisfaction) between individuals whose pay was cut and individuals who survived downsizing. ε_0 denotes the error term.

(Equation 2)

$$\textit{Work attitude} = \gamma_0 + \gamma_1 * \textit{Pay cut} + \gamma_2 * \textit{Both pay cut and downsizing}$$

$$+ \gamma_3 * \textit{Neither pay cut nor downsizing} + \gamma_4 * \textit{Private sector}$$

$$+ \gamma_5 * \textit{Pay cut} * \textit{Private sector}$$

$$+ \gamma_6 * \textit{Both pay cut and downsizing} * \textit{Private sector}$$

$$+ \gamma_7 * \textit{ Neither pay cut nor downsizing} * \textit{Private sector}$$

$$+ \gamma_i * \textit{Controls} + \varepsilon_1$$

Next, the significance of γ_1 and γ_5 in the above OLS Equation 2 was examined. In this equation, γ_1 denotes the difference of the average level of work attitudes between employees whose pay was cut and employees who survived downsizing in the public sector. γ_5 denotes whether this difference is moderated by sector. The negative value of γ_5 denotes that cutting pay (compared to downsizing) has a greater, more negative effect on work attitudes in the private (compared to the public) sector and downsizing (compared to cutting pay) has a greater, more negative effect on work attitudes in the public (compared to private) sector. Thus, the significant negative value of γ_5 supports Hypothesis 1. ε_1 denotes the error term.

Outcome variables (affective commitment and job satisfaction) were standardized for more intuitive comparison of the results.

Study 1: Results

Descriptive statistics

The means, standard deviations and correlations among the variables are presented in Table 3A. Some important points to note include the mean values of the *pay cut* (0.07), *downsizing* (0.42) and *both pay cut and downsizing* (0.16) variables. This indicates that 7 percent of survey participants have experienced a cut in pay, 42 percent of the participants have survived downsizing, and 16 percent of the participants had their pay cut and survived downsizing at the same time. Taken together, 65 percent of the survey participants have experienced a reduction in payroll cost. This indicates that reduction in payroll cost was a common phenomenon in Ireland from 2007 to 2009. The statistics also show that downsizing was a more common method in reducing payroll cost than cutting pay in Ireland during the period. Also notable are the correlations among payroll cost reduction methods and some organizational and group characteristics. For example, there is a negative correlation between private sector and cutting pay (r = -0.14, $p < 0.01$). However, there is a positive correlation between private sector and downsizing (r = 0.09, $p < 0.01$). Interesting differences were also found in the case of organization size (r between organization size of 500 employees or more and pay cut = -0.04, $p < 0.01$; r between organization size of 500 employees or more and downsizing = 0.07, $p < 0.01$) and in the case of union member (r between union member and pay cut = 0.09, $p < 0.01$; r between union member and downsizing = 0.00, ns). This may suggest that certain attributes of organizations or groups lead to a higher or lower likelihood of utilizing one payroll cost reduction method over the other. Finally, the difference in the relationships between payroll cost reduction methods and work attitudes are also notable (r between pay cut and affective commitment = 0.01, ns; r between downsizing and affective commitment = -

0.06, p < 0.01; *r* between both pay cut and downsizing and affective commitment = -0.07, p < 0.01; *r* between neither pay cut nor downsizing and affective commitment = 0.10, p < 0.01; *r* between pay cut and job satisfaction = -0.01, ns; *r* between downsizing and job satisfaction = -0.04, p < 0.05; *r* between both pay cut and downsizing and job satisfaction = -0.07, p < 0.01; *r* between neither pay cut nor downsizing and job satisfaction = 0.10, p < 0.01). Sample sizes by payroll cost reduction method and sector are presented in Table 3B.

==========
Insert Table 3A and 3B about here
==========

OLS Results

Comparing work attitudes. The results of the OLS analysis predicting work attitudes are presented in Table 3C. First, the estimated effects of payroll cost reduction methods on affective commitment are shown in Model A2. The coefficient of pay cut on affective commitment was not significant (estimate = -0.01, SE = 0.06, ns). Therefore, the difference in the average level of affective commitment between employees whose pay was cut and employees who survived downsizing was not significant.

Second, the estimated effects of payroll cost reduction methods on job satisfaction are shown in Model B2. The coefficient of pay cut on job satisfaction was not significant (estimate = -0.08, SE = 0.06, ns). Therefore, the difference in the average level of job satisfaction between employees whose pay was cut and employees who survived downsizing was also not significant.

Hypothesis 1. The estimated moderating effect of sector in the comparison of affective commitment level between employees whose pay was cut and employees who survived downsizing is shown in Model A3 of Table 3C. First, the coefficient of pay cut on affective commitment was not significant (estimate = 0.13, SE = 0.08, ns). This indicates that, in the public sector, there was no significant difference in the average level of affective commitment between employees whose

pay was cut and employees who survived downsizing. However, the coefficient of the interaction term for pay cut and private sector on affective commitment was negative and significant (estimate = -0.34, SE = 0.13, $p < 0.01$). This suggests that cutting pay (compared to downsizing) has a greater, more negative effect on affective commitment in the private (compared to the public) sector and downsizing (compared to cutting pay) has a greater, more negative effect on affective commitment in the public (compared to private) sector.

The estimated moderating effect of sector when comparing levels of job satisfaction between employees whose pay was cut and employees who survived downsizing is shown in Model B3 of Table 3C. First, the coefficient for pay cut on job satisfaction was not significant (estimate = 0.09, SE = 0.08, ns). This indicates that, in the public sector, there was no significant difference in the average level of job satisfaction between employees whose pay was cut and employees who survived downsizing. However, the coefficient for the interaction term of pay cut and private sector on job satisfaction was negative and significant (estimate = -0.44, SE = 0.13, $p < 0.01$). This suggests that cutting pay (compared to downsizing) has a greater, more negative effect on job satisfaction in the private (compared to the public) sector and downsizing (compared to cutting pay) has a greater, more negative effect on job satisfaction in the public (compared to private) sector.

A split sample analysis was conducted to compare the average level of work attitudes between employees whose pay was cut and employees who survived downsizing by sector. A summary of the results is presented in Table 3D. In the private sector, employees who survived downsizing exhibited higher levels of affective commitment and job satisfaction than employees whose pay was cut. In the public sector, however, no significant differences were observed in the levels of work attitudes between employees who survived downsizing and employees whose pay was cut at the five percent significance level. Therefore, the results indicate that employees in the private sector react more negatively to pay cuts than downsizing, while employees in the public

sector do not react differently to the two payroll cost reduction methods (if casual inferences can be made). Taken the results in the main analysis and the split sample analysis together, we can conclude that Hypothesis 1 is supported.

==========
Insert Table 3C and 3D about here
==========

Study 1: Discussion

The findings in this study first indicate that there are no overall differences in the levels of work attitudes (i.e., affective commitment and job satisfaction) between employees whose pay was cut and employees who survived downsizing in Ireland in 2009. However, in the private sector, survivors of downsizing exhibited higher levels of affective commitment and job satisfaction than employees whose pay was cut. By contrast, in the public sector, there was no significant difference in the levels of work attitudes between employees whose pay was cut and employees who survived downsizing.

The findings in Study 1 provide us with the knowledge that there is a sectoral difference when comparing the effects of payroll cost reduction methods on work attitudes. However, the psychological mechanisms utilized in the theorization process were not explicitly examined in this study. All we can confirm from Study 1 is that sectoral difference exists and lack knowledge as to why it exists. To address this, I investigate the psychological mechanism that may cause this difference in Study 2 and Study 3.

Study 2

In Study 2, I'll first investigate whether the below basic psychological assumptions utilized in the theorization process in Study 1 hold.

Assumption 1: *Employees in the private sector value high pay more than their counterparts in the public sector. On the other hand, employees in the public sector value altruistic*

motives more than their counterparts in the private sector.

Assumption 2: *Pay cuts threaten pay work value more than downsizing. On the other hand, downsizing threatens altruistic work value more than pay cuts.*

Study 2: Methods

To investigate whether the assumptions hold, I have conducted a within-subjects design online experiment. I solicited 123 subjects from Amazon Mechanical Turk. The target subjects were employed (those who were not employed, owners of business, self-employed, or students were not surveyed) and reside in the United States. Subjects were 34.1 percent female, 87.0 percent full-time employed, 61.0 percent with bachelor's or higher degree, and with 5.5 years of organizational tenure (SD = 5.1). In terms of age, 0.8, 47.2, 32.5, 10.6 and 8.9 percent of participants were 19 or less, in their 20s, 30s, 40s, and 50s or older, respectively. 63.4 percent of the participants were the employees in the private sector (36.6 percent were employees in the public sector). The subjects who completed the study were paid one dollar.

In the beginning of the experiment, a participant's work values (pay and altruistic work values) and baseline levels of attitudes toward his or her organization (affective commitment) and job (job satisfaction) were measured. In the second part of the experiment, a participant was presented with a scenario describing that the organization he or she works for is suffering from financial distress and is in urgent need to reduce 10 percent of its payroll cost. In the next section of the online experiment, the participant read two sub-scenarios stating the methods that the organization has adopted to reduce its payroll cost. The first sub-scenario stated that the organization had implemented a 10 percent pay cut. In this sub-scenario, the organization had reduced 10 percent pay of all the workers, including the pay of the participant. The second sub-scenario stated that the organization had implemented a 10 percent downsizing. In this sub-scenario, the organization had laid-off 10 percent of its workers. The participant was portrayed as

the survivor of downsizing in this sub-scenario. After reading the two sub-scenarios, the participant was asked to appraise his or her perceived threat in pay and altruistic work values under each sub-scenario. To mitigate the possible ordering effect, the presentation order of these two sub-scenarios was randomized. In the third section of the experiment, sectoral (private vs. public) and demographic (e.g., gender and age) data of the participant were collected. In the final section of the experiment, the participant was debriefed.

Measures

Threat appraisal. To measure the level of threat that cutting pay and downsizing impose to pay and altruistic work values, a participant was presented with the following statement (5-point scale of agreement and disagreement): "Under this change (*cutting pay* or *downsizing*), I will feel that the following aspect of my job is threatened - including the possibility that it will get worse in the future." The *following aspects* for *pay work value* were: the amount of pay, salary level, and total compensation ($\alpha = 0.91$). The *following aspects* for *altruistic work value* were: making the world a better place, being of service to society, and contributing to humanity ($\alpha = 0.88$). The question was adopted from the measure by Fugate, Kinicki and Prussia (2008) and has been revised to reflect the hypothetical nature of the scenarios provided to respondents. Pay and altruistic work values items were adopted from the Work Values Survey by Cable and Edwards (2004).

Work values. To measure work values, a participant was presented with the following statement: "Please indicate how much the following aspects are important to you in selecting a job." The items of *following aspects* for *pay* ($\alpha = 0.87$) and *altruistic* ($\alpha = 0.95$) *work values* were same as in the measure of threat appraisal.

Pay cut (compared to downsizing). The responses made in the pay cut sub-scenario were coded as 1. The responses made in the downsizing sub-scenario were coded as 0.

Private vs. Public sector. Participants who indicated that they work in 1) *departments and*

agencies of federal, provincial, and municipal governments (public servants), and in 2) *universities, schools, hospitals, and long-term care facilities, all nonprofit organizations that receive government or social funding but are not directly operated by any level of government* (workers in parapublic organizations) were categorized as employees in the public sector. Participants who indicated otherwise were categorized as employees in the private sector. This categorization is in alignment with the past studies comparing the outcomes of private and public sector employees (e.g., Lyons et al., 2006).

Controls. Control variables for the statistical model predicting work values include demographic and work characteristics (gender, age, education level, whether the participant has a child(ren), organizational tenure, work hours, full-time/part-time, job level and pay level) and attitudes toward organization (affective commitment) and job (job satisfaction). Work attitudes (affective commitment and job satisfaction) of participants were controlled because employees with better feelings for their organizations (affective commitment) and jobs (job satisfaction) may put less importance in various rewards (e.g., pay and fulfillment in altruistic motives) that they receive from work.

Analysis model

An ordinary least squared (OLS) regression method was utilized to model the sectoral difference in work values (between-subject difference). On the other hand, a paired samples t-test was conducted to determine if there were significant differences in threat to pay and altruistic work values that cutting pay and downsizing impose (within-subject difference).

Study 2: Results

Descriptive statistics

The means, standard deviations and correlations among the variables are presented in Table 3E. One important point to note is the difference in mean values of pay work value (4.04) and

altruistic work value (2.81). This indicates that workers, in general, put more importance in pay than altruistic motives in selecting a job. Another interesting observation is the difference in the relationships between pay cut (compared to downsizing) and threat appraisals (*r* between pay cut and threat to pay work value = 0.53, $p < 0.01$; *r* between pay cut and threat to altruistic work value = -0.04, ns). Finally, the difference in the relationships between private sector (compared to public sector) and work values is also notable (*r* between private sector and pay work value = 0.15, $p < 0.05$; *r* between private sector and altruistic work value = -0.29, $p < 0.01$).

==========
Insert Table 3E about here
==========

OLS model predicting work values

The OLS model predicting work values is presented in Table 3F. First, the estimated effect of sector on pay work value is shown in Model C2. The coefficient for private sector on pay work value is positive and significant (estimate = 0.40, SE = 0.20, $p < 0.05$). This indicates that the employees in the private sector exhibit higher levels of pay work value than their counterparts in the public sector by 0.40 standard deviation. Second, the estimated effect of sector on altruistic work value is shown in Model D2. The coefficient of private sector on altruistic work value is negative and significant (estimate = -0.47, SE = 0.19, $p < 0.05$). This indicates that the employees in the private sector exhibit lower levels of altruistic work value than their counterparts in the public sector by 0.47 standard deviation. Taken together, we can conclude that the employees in the private sector put more importance on pay than their counterparts in the public sector when selecting a job. We can also conclude that that the employees in the public sector put more importance in altruistic motives than their counterparts in the private sector when selecting a job. Therefore, the results demonstrate that Assumption 1 utilized in the theorization process of Study 1 holds.

==========
Insert Table 3F about here
==========

Paired samples t-test of threat appraisal

The results of the paired samples t-test are shown in Table 3G. Participants felt higher levels of threat to their pay in the pay cut condition than under the downsizing condition (difference = 1.29, t(122) = 10.01, p = 0.00). On the other hand, there was no significant difference in the levels of threat that participants felt toward their altruistic motives in the two payroll cost reduction conditions (difference = -0.07, t(122) = -0.90, p = 0.37). Taken together, we can conclude that employees feel threat to their pay more in the pay cut condition than in the downsizing condition. However, I found no evidence that employees feel threat to their altruistic motives more under the downsizing condition than under the pay cut condition. Therefore, the results demonstrate that Assumption 2 utilized in the theorization process in Study 1 partially holds; only stronger threat to pay is observed in the pay cut condition than in the downsizing condition.

==========
Insert Table 3G about here
==========

Study 2: Discussion

The findings in Study 2 first indicate that employees in the private sector value pay more while employees in the public sector value altruistic motives more. Moreover, the findings also demonstrate that pay cuts threaten pay work value more than does downsizing. However, no support was found for the assumption that downsizing threatens altruistic work value more than pay cuts.

The findings in this study suggest that the sectoral difference in responses (in terms of work attitudes) to payroll cost reduction methods is likely to be derived from the psychological process that cutting pay, compared to downsizing, threatens pay work value and that employees in the

private sector value pay more than their counterparts in the public sector. Therefore, based on the implications from Study 2, Study 3 seeks to establish a more sophisticated psychological model and to test the model.

Study 3

When a certain aspect of a job is threatened, an employee may develop negative emotions toward that aspect of his or her job (Fugate et al., 2008). When their pay level is threatened, then, employees may develop negative emotions toward their pay level. As we have examined in Study 2, cutting pay threatens pay level more than downsizing. Thus, we can expect that employees who had their pay cut will develop more negative feelings (i.e., be less satisfied) toward their pay level than employees who survived downsizing. Therefore, I hypothesize as follows.

Hypothesis 2: *Cutting pay, compared to downsizing, has a stronger negative relationship with pay-level satisfaction.*

Past studies confirm the positive relationships between pay-level satisfaction and attitudinal/behavioral outcomes that can benefit organizations (Heneman, 1985). In particular, studies demonstrate positive relationships between pay-level satisfaction and the work attitudes of interest in Study 1 (i.e., affective commitment and job satisfaction). For example, the study by Lum and colleagues (1998) demonstrates that pay-level satisfaction of nurses is positively related with both job satisfaction and commitment. Moreover, pay-level satisfaction is often viewed as a sub-dimension of a broader job satisfaction (Heneman & Schwab, 1985). This leads to Hypothesis 3.

Hypothesis 3: *Pay-level satisfaction is positively related to work attitudes (i.e. affective commitment and job satisfaction).*

Various past studies (Buelens & Van den Broeck, 2007; Frank & Lewis, 2004; Houston, 2000; Karl & Sutton, 1998; Khojasteh, 1993; Lewis & Frank, 2002; Newstrom et al., 1976; Rainey,

1982; Rawls et al., 1975) as well as Study 2 in this paper confirm that employees in the private sector value pay more than their counterparts in the public sector. We can therefore expect that the positive relationships between pay-level satisfaction and work attitudes to be stronger in the private sector than in the public sector. Employees in the private sector (compared to employees in the public sector) have stronger needs for pay and fulfilling these needs (i.e., being satisfied with their pay level) may have a stronger effect in forming a positive attitude toward the subjects who provide these needs (i.e., their organizations and jobs). Thus, I hypothesize as follows.

> ***Hypothesis 4:*** *The relationship between pay-level satisfaction and work attitudes (i.e. affective commitment and job satisfaction) is moderated by sector (private vs. public). In the private sector, this relationship is more positive than in the public sector.*

From Hypotheses 2 through 4, we can model the following two psychological mechanisms. First, from Hypotheses 2 and 3, we can expect that *cutting pay, compared to downsizing, has stronger negative indirect relationships with work attitudes (i.e., affective commitment and job satisfaction) through having a stronger negative relationship with pay-level satisfaction and pay-level satisfaction having positive relationships with work attitudes (**Hypothesis 5**).* Second, with the addition of Hypothesis 4, we can expect that *the comparative indirect relationships in Hypothesis 5 are moderated in that these indirect relationships are more negative in the private sector than in the public sector (**Hypothesis 6**).* The hypothesized model is depicted in Figure 3A.

==========
Add Figure 3A about here
==========

Study 3: Methods

Overview and sample

Study 3 uses the same sample utilized in Study 1 (2009 NWS in Ireland). The only difference in the analysis models between the two studies is that Study 3 adds pay-level satisfaction

variable in the model. Four employees (out of 4,359 employees) in the sample of Study 1 did not report their pay-level satisfaction. As a result, the final sample for Study 3 consists of 4,355 employees.

Measures

Pay-level satisfaction. To measure pay-level satisfaction, a participant was asked to what extent the individual agreed or disagreed (5 point scale) with the following statement: "I am satisfied with my earnings from my current job." This is a single-item measure and raises an issue of reliability. However, the study by Nagy (2002) shows that the correlation between a single-item measure of pay-level satisfaction (i.e., satisfaction with the "amount" of pay) and a multiple-item measure of pay satisfaction in Job Descriptive Index (Smith et al., 1969) is significant and strong ($r = 0.72$, $p < 0.01$). This indicates the possibility of using a single-item measure for pay-level satisfaction.

Measures for other variables. Other than the addition of pay-level satisfaction, all the other variables and their measures in the analysis model of Study 3 were the same as those in the analysis model of Study 1.

Analysis model

As in Study 1, the same analysis method (OLS regression method) was used to test Hypotheses 2 through 4. To test Hypotheses 5 and 6, I conducted a bootstrapping analysis utilizing the model 14 of the PROCESS macro by Hayes (2013) in SPSS (ver. 20). For all the analyses, affective commitment, job satisfaction and pay-level satisfaction were standardized.

Study 3: Results

OLS Results

Hypothesis 2. The results of the OLS analysis predicting pay-level satisfaction are presented in Models E1 and E2 of Table 3H. The estimated effects of payroll cost reduction

methods on pay-level satisfaction are shown in Model E2. The coefficient for pay cut (*vs. downsizing*) on pay-level satisfaction is negative and significant (estimate = -0.39, SE = 0.06, $p < 0.01$). This indicates that pay-level satisfaction of employees who had their pay cut is lower than that of employees who survived downsizing. Therefore, Hypothesis 2 is supported.

Hypothesis 3. The estimated effects of pay-level satisfaction on work attitudes are shown in Models F1 and G1 of Table 3H. First, in Model F1, the coefficient of pay-level satisfaction on affective commitment is positive and significant (estimate = 0.28, SE = 0.01, $p < 0.01$). Next, in Model G1, the coefficient for pay-level satisfaction on job satisfaction is also positive and significant (estimate = 0.36, SE = 0.01, $p < 0.01$). These results indicate that pay-level satisfaction is positively related to work attitudes. Thus, Hypothesis 3 is supported.

Hypothesis 4. The estimated moderating effects of sector on the relationships between pay-level satisfaction and work attitudes are shown in Models F2 and G2 of Table 3H. First, in Model F2, the coefficient for the interaction term of pay-level satisfaction and private sector (vs. *public sector*) on affective commitment is positive and significant (estimate = 0.16, SE = 0.03, $p < 0.01$). Next, in Model G2, the coefficient of the interaction term of pay-level satisfaction and private sector (vs. *public sector*) on job satisfaction is also positive and significant (estimate = 0.18, SE = 0.03, $p < 0.01$). These outcomes demonstrate that the positive relationships between pay-level satisfaction and work attitudes (i.e., affective commitment and job satisfaction) are strengthened in the private sector (than in the public sector). Therefore, Hypothesis 4 is supported.

==========
Insert Table 3H about here
==========

Bootstrapping Analysis Results

Hypotheses 5 and 6. To examine whether the indirect effect of 'pay cut (*vs. downsizing*) → pay-level satisfaction → work attitudes' differ by sector, I conducted a bootstrapping analysis

utilizing the model 14 of the PROCESS macro by Hayes (2013) in SPSS (ver. 20). First, the indirect effect of pay cut (compared to downsizing) on affective commitment through pay-level satisfaction was negative and significant in both sectors (indirect effect size in the private sector = -0.13, SE = 0.02, bootstrap 95% confidence interval [-0.18, -0.09]; indirect effect size in the public sector = -0.07, SE = 0.02, bootstrap 95% confidence interval [-0.10, -0.04]). Next, the moderated mediation index for this indirect relationship was also significant (index = -0.06, SE = 0.02, bootstrap 95% confidence interval [-0.10, -0.03]) and the indirect effect size in the private sector (-0.13) was about 1.86 times larger than that in the public sector (-0.07).

A similar pattern was observed for the indirect effect of pay cut (compared to downsizing) on job satisfaction through pay-level satisfaction. First, this indirect effect was negative and significant in both private and public sectors (indirect effect size in the private sector = -0.16, SE = 0.03, bootstrap 95% confidence interval [-0.22, -0.11]; indirect effect size in the public sector = -0.09, SE = 0.02, bootstrap 95% confidence interval [-0.14, -0.06]). Next, the moderated mediation index for this indirect relationship was also significant (index = -0.07, SE = 0.02, bootstrap 95% confidence interval [-0.11, -0.04]) and the indirect effect size in the private sector (-0.16) was about 1.78 times larger than that in the public sector (-0.09).

The bootstrapping analysis demonstrates the following two patterns. First, the indirect effects of cutting pay (compared to downsizing) on work attitudes (i.e., affective commitment and job satisfaction) through pay-level satisfaction are negative and significant in both private and public sectors. Second, these indirect effects are stronger in the negative direction in the private sector than in the public sector. Taken together, we can conclude that Hypotheses 5 and 6 are supported.

Study 3: Discussion

The findings from Study 3 reveal an important psychological mechanism for explaining

why we observe sectoral differences when comparing the effects of payroll cost reduction methods on work attitudes. The results indicate that cutting pay, compared to downsizing, has a more negative relationship with work attitudes through having a more negative relationship with pay-level satisfaction. However, in the public sector, the relationships between pay-level satisfaction and work attitudes are weaker than those in the private sector. This, in turn, weakens the indirect effect of 'pay cut (*vs. downsizing*) → pay-level satisfaction → work attitudes' in the public sector (than in the private sector). This, in part, may be why we observe a significant difference in responses (in terms of work attitudes) to payroll cost reduction methods in favor of downsizing over pay cuts in the private sector while we observe no difference in the public sector. Although this is likely not the only psychological mechanism that explains the sectoral difference, the outcomes in Study 3 provide us with an important implication for understanding why the sectoral difference may exist.

General Discussion

Theoretical Implications

The findings in this study provide some important managerial knowledge related to employees' responses to payroll cost reduction methods. First, the findings in Study 1 indicate that there is a significant sectoral difference when comparing the effects of payroll cost reduction methods (cutting pay vs. downsizing) on work attitudes of employees. In the private sector, downsizing better maintains work attitudes than cutting pay. In the public sector, on the other hand, there are no significant differences in work attitudes between employees whose pay was cut and employees who survived downsizing. Second, the findings in Studies 2 and 3 reveal that one possible psychological mechanism that drives this sectoral difference is that public sector employees value pay less than private sector employees. In Study 2, public sector employees exhibited lower level of pay work value than private sector employees. In Study 3, the

relationships between pay-level satisfaction and work attitudes were weaker in the public sector than in the private sector. As a result, the negative indirect effects of pay cut (compared to downsizing) on work attitudes through pay-level satisfaction was weaker in the public sector than in the private sector.

The findings in this study provide some important theoretical implications to various fields of management. First, the current study highlights the importance of fit between change type and situational factors in managing work attitudes under change. In particular, the study demonstrates that the fit between the type of payroll cost reduction method (cutting pay vs. downsizing) and sector (private vs. public) is important in managing work attitudes in the context of payroll cost reduction. The current study, thus, not only addresses the concern raised in the organizational change management literature that the differential effect of change type on work attitudes of employees should be examined (Oreg et al., 2011), but also urges researchers to incorporate change type in the overall model of change management.

Second, the current study suggests that sector can be an important moderating factor when comparing the effects of cutting pay and downsizing on work attitudes. Accordingly, the study builds on the comparison model of payroll cost reduction and encourages future studies to consider sectoral effects when comparing the consequences of cutting pay and downsizing.

Lastly, the results for this study provide support for public service motivation (PSM) theory (e.g., Frederickson & Hart, 1985; Perry & Hondeghem, 2008; Perry & Porter, 1982; Perry & Wise, 1990) in that the results imply the need for acknowledging sectoral difference in managing payroll cost reduction. A significant sectoral difference in employees' reactions to cutting pay and downsizing was observed, and the results support the notion that we cannot downplay sectoral differences in managing employees when payroll cost needs to be reduced. From a broader HR management perspective, the findings in this study provide stronger support for the contingency

perspective (e.g., Dyer, 1985; Fisher, 1989; Miles & Snow, 1984; Schuler & Jackson, 1987), which emphasizes fit between HR practices with business environments and strategies. This is in contrast with the universalistic perspective (Delaney, Lewin, & Ichniowski, 1989; Huselid, 1995; Osterman, 1994; Pfeffer, 1994), which argues that some HR practices consistently yield superior outcomes and that organizations should adopt these best practices regardless of their business environments or strategies.

Practical Implications

This study also provides a number of implications for policy and practice. The results suggest that organizations should consider the sector in which they operate when deciding which payroll cost reduction method to utilize. More specifically, survivors of downsizing exhibited higher levels of work attitudes (i.e., affective commitment and job satisfaction) than employees whose pay was cut in the private sector. Therefore, organizations in the private sector with business strategies or competitive advantages that rely on high levels of work attitudes may want to avoid cutting pay and choose instead to downsize when payroll cost needs to be reduced. On the other hand, in the public sector, there were no significant differences in the levels of affective commitment and job satisfaction between employees whose pay was cut and employees who survived downsizing. As a result, the choice in payroll cost reduction method seems to be less restricted for organizations in the public sector than their counterparts in the private sector – if maintaining the level work attitudes is their concern.

Limitations

Despite the implications in the current study, there are some limitations. First, the results cannot be considered casual due to the cross-sectional nature of the data; there is a possibility of reverse-causality in explaining the results (especially for Studies 1 and 3). For example, employees who are more committed or satisfied with their jobs may also be higher performers and

thus more likely to be survivors of downsizing than to have their pay cut. However, this problem may be less likely as the survey (NWS) measuring the event of pay cuts and downsizing is based on the past two years of respondents' experience while the level of work attitudes were measured at the time when the survey was taken. Therefore, it is highly likely that there is a time gap between the event of payroll cost reduction and outcomes of interest (i.e., work attitudes). Nevertheless, future studies should rely on panel data or qualitative methods for stronger casual inferences.

Second, there may be concerns of common method bias (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) due to the single data source used for all three studies. As a result, the estimated relationships between payroll cost reduction methods and work attitudes in this study may be stronger than the relationships that we would otherwise observe. However, as the main objective in studies in this paper is to "compare" the relative differences in the effects of payroll cost reduction methods on the outcomes of interest rather than to "estimate" the effects of payroll cost reduction methods, this limitation may be less of a concern.

Lastly, problems regarding omitted variable bias may also be prevalent in the studies in this paper. Although some variables that may influence the outcomes and other important variables are controlled, there may be some additional variables not included. For example, in Study 1 and 3, the survey (NWS) does not provide information regarding the magnitude of pay cuts or the number of employees that were reduced. There may be bias in estimating the coefficients of interest and future studies should examine this issue further. Future studies may also want to establish surveys that are specifically intended to investigate payroll cost reduction methods to overcome these difficulties.

Conclusion

Despite the limitations, the current study makes meaningful contributions to multiple fields in management. The current study is the first attempt to incorporate work sector as the moderator

in the direct comparison model of payroll cost reduction methods. The study also highlights the importance of fit between change types and situational factors in managing change. In this way, the study provides valuable implications for practitioners managing change in the context of payroll cost reduction.

REFERENCES (PAPER 3)

Allen, N. J., & Meyer, J. P. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. ***Journal of Occupational Psychology***, 63: 1–18.

Armenakis, A. A., Bernerth, J. B., Pitts, J. P., & Walker, H. J. 2007. Organizational change recipients' beliefs scale: Development of an assessment instrument. ***Journal of Applied Behavioral Science***, 43: 495–505.

Arthur, J. 1994. Effects of human resource systems on manufacturing performance and turnover. ***Academy of Management Journal***, 37: 670–687.

Ashford, S. J. 1988. Individual strategies for coping with stress during organizational transitions. ***Journal of Applied Behavioral Science***, 24: 19-36.

Barzelay, M. 2001. ***The New Public Management: Improving research and policy dialogue***. Berkeley: University of California Press.

Blau, P. M. 1960. Orientation toward clients in a public welfare agency. ***Administrative Science Quarterly,*** 5: 341–361.

Bommer, W. H., Rich, G. A., & Rubin, R. S. 2005. Changing attitudes about change: longitudinal effects of transformational leader behavior on employee cynicism about organizational change. ***Journal of Organizational Behavior***, 26: 733–753.

Brockner, J., Davy, J., & Carter, C. 1985. Layoffs, self-esteem, and survivor guilt: Motivational, affective, and attitudinal consequences. ***Organizational Behavior and Human Decision Processes***, 36: 229–244.

Brockner, J., Greenberg, J., Brockner, A., Bortz, J., Davy, J., & Carter, C. 1986. Layoffs, equity theory, and work performance: Further evidence of the impact of survivor guilt. ***Academy of Management Journal***, 29: 373–384.

Buelens, M., & Van den Broeck, H. 2007. An analysis of differences in work motivation between public and private sector organizations. ***Public Administration Review***, 67: 65–74.

Buhayar, N. (2009, July 22). The art of cutting pay, not people. ***CBS News***. Retrieved July 19, 2016, from http://www.cbsnews.com/news/the-art-of-cutting-pay-not-people

Buurman, M., Delfgaauw, J., Dur, R., & Van den Bossche, S. 2012. Public sector employees: Risk averse and altruistic?. ***Journal of Economic Behavior & Organization***, 83: 279–291.

Cable, D. M., & Edwards, J. R. 2004. Complementary and supplementary fit: A theoretical and empirical integration. ***Journal of Applied Psychology***, 89(5): 822–834.

Caldwell, S. D., Herold, D. M., & Fedor, D. B. 2004. Toward an understanding of the relationships among organizational change, individual differences, and changes in person-environment fit: A cross-level study. ***Journal of Applied Psychology***, 89: 868–882.

Carsten, J. M., & Spector, P. E. 1987. Unemployment, job satisfaction, and employee turnover: A meta-analytic test of the Muchinsky model. ***Journal of Applied Psychology***, 72: 374–381.

Cennamo, L., & Gardner, D. 2008. Generational differences in work values, outcomes and person-organisation values fit. ***Journal of Managerial Psychology***, 23: 891–906.

Coyle-Shaipro, J. A. M. 2002. Changing employee attitudes: The independent effects of TQM and profit sharing on continuous improvement orientation. ***Journal of Applied Behavioral Science***, 38: 57–77.

Daly, J. P., & Geyer, P. D. 1994. The role of fairness in implementing large-scale change: Employee evaluations of process and outcome in seven facility relocations. ***Journal of Organizational Behavior***, 15: 623–638.

Datta, D. K., Guthrie, J. P., Basuil, D., & Pandey, A. 2010. Causes and effects of employee

downsizing: A review and synthesis. ***Journal of Management***, 36: 281–348.
De Cooman, R., De Gieter, S., Pepermans, R., Hermans, S., Du Bois, C., Caers, R., & Jegers, M. 2009. Person-organization fit: Testing socialization and attraction-selection-attrition hypotheses. ***Journal of Vocational Behavior***, 74: 102–107.
Delaney, J. T., Lewin, D., & Ichniowski, C. 1989. ***Human resource policies and practices in American firms***. Washington, DC: U.S. Government Printing Office.
Locke, E. 1976. The nature and causes of job satisfaction. In M. D. Dunrette (Eds.), ***Handbook of industrial and organizational psychology***, 1297–1350. Chicago: Rand McNally.
Dyer, L. 1985. Strategic human resources management and planning. In K. Rowland & G. Ferris (Eds.), ***Research in personnel and human resource management (Vol. 3)***, 1–30. Greenwich, CT: JAI Press.
Eagly, A. H., & Chaiken, S. 1993. ***The psychology of attitudes***. Fort Worth, TX: Harcourt Brace Jovanovich.
Elizur, D. 1984. Facets of work values: A structural analysis of work outcomes. ***Journal of Applied Psychology***, 69: 379–389.
Fiorito, J., Bozeman, D. P., Young, A., & Meurs, J. A. 2007. Affective commitment, human resource practices, and organizational characteristics. ***Journal of Managerial Issues***, 19: 186–207.
Fisher, C. D. 1989. Current and recurrent challenges in HRM. ***Journal of Management***, 15: 157–180.
Frank, S. A., & Lewis, G. B. 2004. Government employees: Working hard or hardly working?. ***American Review of Public Administration***, 34: 36–51.
Frederickson, H. G., & Hart. D. K. 1985. The public service and the patriotism of benevolence. ***Public Administration Review***, 45: 547–53.
Fugate, M., Kinicki, A. J., & Prussia, G. E. 2008. Employee coping with organizational change: An examination of alternative theoretical perspectives and models. ***Personnel Psychology***, 61: 1–36.
Fugate, M., Prussia, G. E., & Kinicki, A. J. 2012. Managing employee withdrawal during organizational change: The role of threat appraisal. ***Journal of Management***, 38: 890–914.
Furst, S. A., & Cable, D. M. 2008. Employee resistance to organizational change: Managerial influence tactics and leader-member exchange. ***Journal of Applied Psychology***, 93: 453–461.
Gaertner, K. N. 1989. Winning and losing: Understanding managers' reactions to strategic change. ***Human Relations***, 42: 527–546.
Gerhart, B., & Rynes, S. 2003. ***Compensation: Theory, evidence, and strategic implications***. Thousand Oaks, CA: SAGE Publications.
Gong, Y., Law, K. S., Chang, S., & Xin, K. R. 2009. Human resources management and firm performance: The differential role of managerial affective and continuance commitment. ***Journal of Applied Psychology***, 94: 263–275.
Gracon, H., & Clark, M. 1994. Layoffs should come last. ***Spectrum, IEEE***, 31: 52–55.
Hackett, R. D., & Guion, R. M. 1985. A reevaluation of the absenteeism-job satisfaction relationship. ***Organizational Behavior and Human Decision Processes***, 35: 340–381.
Hayes, A. F. 2013. ***Introduction to mediation, moderation, and conditional process analysis***. New York: Guilford.
Heneman, H. G., III. 1985. Pay satisfaction. In M. Rowland & J. Ferris (Eds.), ***Research in personnel and human resources management (Vol. 3)***, 115–140. Greenwich, CT: JAI

Press.
Heneman III, H. G., & Schwab, D. P. 1985. Pay satisfaction: Its multidimensional nature and measurement. ***International Journal of Psychology***, 20: 129–141.
Herold, D. M., Fedor, D. B., & Caldwell, S. D. 2007. Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change. ***Journal of Applied Psychology***, 92: 942–951.
Herold, D. M., Fedor, D. B., Caldwell, S. D., & Liu, Y. 2008. The effects of transformational and change leadership on employees' commitment to a change: A multilevel study. ***Journal of Applied Psychology***, 93: 346–357.
Hobson, J. (2009, February 16). Would you like a pay cut or layoff? ***Marketplace***. Retrieved October 6, 2012, from http://www.marketplace.org/topics/business/fallout-financial-crisis/would-you-pay-cut-or-layoff-0.
Holt, D. T., Armenakis, A. A., Feild, H. S., & Harris, S. G. 2007. Readiness for organizational change: The systematic development of a scale. ***Journal of Applied Behavioral Science***, 43: 232–255.
Hornung, S., & Rousseau, D. M. 2007. Active on the job-proactive in change: How autonomy at work contributes to employee support for organizational change. ***Journal of Applied Behavioral Science***, 43: 401–426.
Houston, D. J. 2000. Public-service motivation: A multivariate test. ***Journal of Public Administration Research and Theory***, 10: 713–728.
Huselid, M. A. 1995. The impact of human resource management practices on turnover, productivity, and corporate financial performance. ***Academy of Management Journal***, 38: 635–672.
Jimmieson, N. L., Terry, D. J., & Callan, V. J. 2004. A longitudinal study of employee adaptation to organizational change: The role of change-related information and change-related self-efficacy. ***Journal of Occupational Health Psychology***, 9: 11–27.
Judge, T. A., & Kammeyer-Mueller, J. D. 2012. Job attitudes. ***Annual Review of Psychology***, 63: 341–367.
Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. 2001. The job satisfaction–job performance relationship: A qualitative and quantitative review. ***Psychological Bulletin***, 127: 376–407.
Judge, T. A., Thoresen, C. J., Pucik, V., & Welbourne, T. M. 1999. Managerial coping with organizational change: A dispositional perspective. ***Journal of Applied Psychology***, 84: 107–122.
Kalleberg, A. L. 1977. Work values and job rewards: A theory of job satisfaction. ***American Sociological Review***, 42: 124–143.
Karl, K. A., & Sutton. C. L. 1998. Job values in today's workforce : A comparison of public and private sector employees. ***Public Personnel Management***, 27: 515–527.
Keller, L. M., Bouchard, T. J., Arvey, R. D., Segal, N. L., & Dawis, R. V. 1992. Work values: Genetic and environmental influences. ***Journal of Applied Psychology***, 77: 79–88.
Khojasteh, M. 1993. Motivating the private vs. public sector managers. ***Public Personnel Management***, 22: 391–401.
Kim, J., Song, E., & Lee, S. 2013. Organizational change and employee organizational identification: Mediation of perceived uncertainty. ***Social Behavior and Personality***, 41: 1019–1034.
Kirton, M. J., & Mulligan, G. 1973. Correlates of managers' attitudes toward change. ***Journal of Applied Psychology***, 58: 101–107.

Lau, C.-M. and R. W. Woodman. 1995. Understanding organizational change: A schematic perspective. ***Academy of Management Journal***, 38: 537–554.

Lewin, D. (2009, January 29). Cut pay, not people. ***The Wall Street Journal***. Retrieved October 6, 2012, from http://online.wsj.com/article/SB123326826586730619.html.

Lewis, G. B. & Frank. S. A. 2002. Who wants to work for the government? ***Public Administration Review***, 62: 395–404.

Library Worklife. (2009, March 13). Difficult decisions: Pay cut vs. layoff. ***ALA-APA***. Retrieved July 19, 2016, from http://ala-apa.org/newsletter/2009/03/13/difficult-decisions-pay-cut-vs-layoff.

Locke, E. 1976. The nature and causes of job satisfaction. In M. D. Dunrette (Eds.), ***Handbook of industrial and organizational psychology***, 1297–1350. Chicago: Rand McNally.

Lum, L., Kervin, J., Clark, K., Reid, F., & Sirola, W. 1998. Explaining nursing turnover intent: Job satisfaction, pay satisfaction, or organizational commitment? ***Journal of Organizational Behavior***, 19: 305–320.

Lyons, S. T., Duxbury, L. E., & Higgins, C. A. 2006. A comparison of the values and commitment of private sector, public sector, and parapublic sector employees. ***Public Administration Review***, 66: 605–618.

Mathieu, J. E., & Zajac, D. M. 1990. A review and meta-analysis of the antecedents, correlates, and consequences of affective commitment. ***Psychological Bulletin***, 108: 171–194.

Meglino, B. M., Ravlin, E. C., & Adkins, C. L. 1989. A work values approach to corporate culture: A field test of the value congruence process and its relationship to individual outcomes. ***Journal of Applied Psychology***, 74: 424–432.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. 2002. Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. ***Journal of Vocational Behavior***, 61: 20–52.

Miles, R. E., & Snow, C. C. 1984. Designing strategic human resource systems. ***Organizational Dynamics***, 13: 36–52.

Miller, V. D., Johnson, J. R., & Grau, J. 1994. Antecedents to willingness to participate in a planned organizational change. ***Journal of Applied Communication Research***, 22: 59–80.

Miller, K. I., & Monge, P. R. 1985. Social information and employee anxiety about organizational change. ***Human Communication Research***, 11: 365–386.

Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment. ***Journal of Vocational Behavior***, 14: 224–247.

Moynihan, D. P., & Pandey, S. K., 2007. The role of organizations in fostering public service motivation. ***Public Administration Review***, 67: 40–53.

Nagy, M. S. 2002. Using a single-item approach to measure facet job satisfaction. ***Journal of Occupational and Organizational Psychology***, 75: 77−86.

Newstrom, J. W., Reif, W. E., & Monczka, R. M. 1976. Motivating the public employee: Fact vs. fiction. ***Public Personnel Management***, 5: 67–72.

O'Connel, P. J., Russell, H., Watson, D., & Byrne, D. 2010. ***The changing workplace: A survey of employees' views and experiences***. Dublin: National Centre for Partnership and Performance.

Omer, S. (2008, December 30). Would you take a pay cut to save jobs? ***NBC News***. Retrieved November 4, 2013, from http://www.nbcnews.com/id/28198637/#.UnhuvpS_d3Z.

Oreg, S., & Berson, Y. 2011. Leadership and employees' reactions to change: The role of leaders' personal attributes and transformational leadership style. ***Personnel Psychology***, 64: 627–659.

Oreg, S., & Sverdlik, N. 2011. Ambivalence toward imposed change: The conflict between dispositional resistance to change and the orientation toward the change agent. ***Journal of Applied Psychology***, 96: 337–349.

Oreg, S., Vakola, M., & Armenakis, A. 2011. Change recipients' reactions to organizational change A 60-year review of quantitative studies. ***The Journal of Applied Behavioral Science***, 47: 461–524.

Organ, D. W., & Konovsky, M. 1989. Cognitive versus affective determinants of organizational citizenship behavior. ***Journal of Applied Psychology***, 74: 157–164.

Osborne, D., & Gaebler, T. 1992. ***Reinventing government***. New York: Penguin Book.

Osterman, P. 1994. How common is workplace transformation and who adopts it? ***Industrial and Labor Relations Review***, 47: 173–188.

Paterson, J. M., & Cary, J. 2002. Organizational justice, change anxiety, and acceptance of downsizing: Preliminary tests of an AET-based model. ***Motivation and Emotion***, 26: 83–103.

Peach, M., Jimmieson, N. L., & White, K. M. 2005. Beliefs underlying employee readiness to support a building relocation: A theory of planned behavior perspective. ***Organization Development Journal***, 23: 9–22.

Perry, J. L., & Hondeghem, A. 2008. ***Motivation in public management: The call for public service***. New York: Oxford University Press.

Perry, J. L., & Porter, L. W. 1982. Factors affecting the context for motivation in public organizations. ***Academy of Management Review***, 7: 89–98.

Perry, J. L., & Wise, L. R. 1990. The motivational bases of public service. ***Public Administration Review***, 50: 367–73.

Pfeffer, J. 1994. ***Competitive advantage through people: Unleashing the power of the work force***. Boston: Harvard Business School Press.

Phillips, J.S. & Freedman, S.M. 1985. Contingent pay and intrinsic task interest: Moderating effects of work values. ***Journal of Applied Psychology***, 70: 206–313.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. ***Journal of Applied Psychology***, 88: 879–903.

Rafferty, A. E., & Simons, R. H. 2006. An examination of the antecedents of readiness for fine-tuning and corporate transformation changes. ***Journal of Business and Psychology***, 20: 325–350.

Rainey, H. G. 1982. Reward preferences among public and private managers: In search of the service ethic. ***American Review of Public Administration***, 16: 288–302.

Ralston, D. A., Holt, D. H., Terpstra, R. H., & Kai-Cheng, Y. 1997. The impact of national culture and economic ideology on managerial work values: A study of the United States, Russia, Japan, and China. ***Journal of International Business Studies***, 28: 177–207.

Rampell, C. (2008, November 18). Reader feedback: Why layoffs instead of wage cuts? ***Economix***. Retrieved April 30, 2013, from http://economix.blogs.nytimes.com/2008/11/18/reader-feedback-why-layoffs-instead-of-wage-cuts/.

Ravlin, E. C., & Meglino, B. M. 1987. Effect of values on perception and decision making: A study of alternative work values measures. ***Journal of Applied Psychology***, 72: 666–673.

Rawls, J. R., Ullrich, R. A., & Nelson, O. T. 1975. A comparison of managers entering or reentering the profit and nonprofit sectors. ***Academy of Management Journal***, 18: 616–623.

Rodell, J. B., & Colquitt, J. A. 2009. Looking ahead in times of uncertainty: The role of anticipatory justice in an organizational change context. ***Journal of Applied Psychology***, 94: 89–1002.

Rottenberg, S. 1956. On choice in labor markets. ***Industrial and Labor Relations Review***, 9:183–199.

Sagie, A., & Koslowsky, M. 1994. Organizational attitudes and behaviors as a function of participation in strategic and tactical change decisions: An application of path-goal theory. ***Journal of Organizational Behavior***, 15: 37–47.

Schuler, R. S., & Jackson, S. E. 1987. Linking competitive strategies with human resource management practices. ***Academy of Management Executive***, 1: 207–219.

Schweiger, D. M., & Denisi, A. S. 1991. Communication with Employees Following a Merger: A Longitudinal Field Experiment. ***Academy of Management Journal***, 34: 110–135.

Smith, P. C., Kendall, L. M., & Hulin, C. L. 1969. ***The measurement of satisfaction in work and retirement***. Chicago: Rand McNally.

Snorradottir, A., Vilhjalmsson, R., Rafnsdottir, G. L., & Tomasson, K. 2013. Financial crisis and collapsed banks: Psychological distress and work related factors among surviving employees−A nation-wide study. ***American Journal of Industrial Medicine***, 56: 1095−1106.

Taylor, J. C., & Bowers, D. G. 1974. ***The survey of organizations: Towards a machine scored, standardized questionnaire***. Ann Arbor, MI: University of Michigan, Institute for Social Research.

Taylor, P., Parker, K., Kochhar, R., Fry, R., Funk, C., Patten, E., & Motel, S. (2012, February 9). Young, underemployed and optimistic: Coming of age, slowly, in a tough economy. ***Pew Research Center***. Retrieved July 19, 2016, from http://www.pewsocialtrends.org/2012/02/09/young-underemployed-and-optimistic

Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. 2010. Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. ***Journal of Management***, 36: 1117–1142.

Van Maanen, J. 1975. Police socialization: A longitudinal examination of job attitudes in an urban police department. ***Administrative Science Quarterly***, 20: 207–228.

Wanberg, C. R., & Banas, J. T. 2000. Predictors and outcomes of openness to changes in a reorganizing workplace. ***Journal of Applied Psychology***, 85: 132–142.

Wanous, J. P., Reichers, A. E., & Hudy, M. J. 1997. Overall job satisfaction: How good are single-item measures?. ***Journal of Applied Psychology***, 82: 247–252.

Warr, P., Cook, J., & Wall, T. 1979. Scales for the measurement of some work attitudes and aspects of psychological well-being. ***Journal of Occupational Psychology***, 52: 129−148.

Weaver, C. N. 1978. Sex differences in the determinants of job satisfaction. ***Academy of Management Journal***, 21: 265–274.

Weiss, D, Dawis, R., England, G., & Lofquist, L. 1967. ***Manual for the Minnesota Satisfaction Questionnaire***. Minneapolis: University of Minnesota Industrial Relations Center.

WorldatWork. 2010. ***Salary budget survey: 2009-2010 January update***. Scottsdale, AZ; WorldatWork.

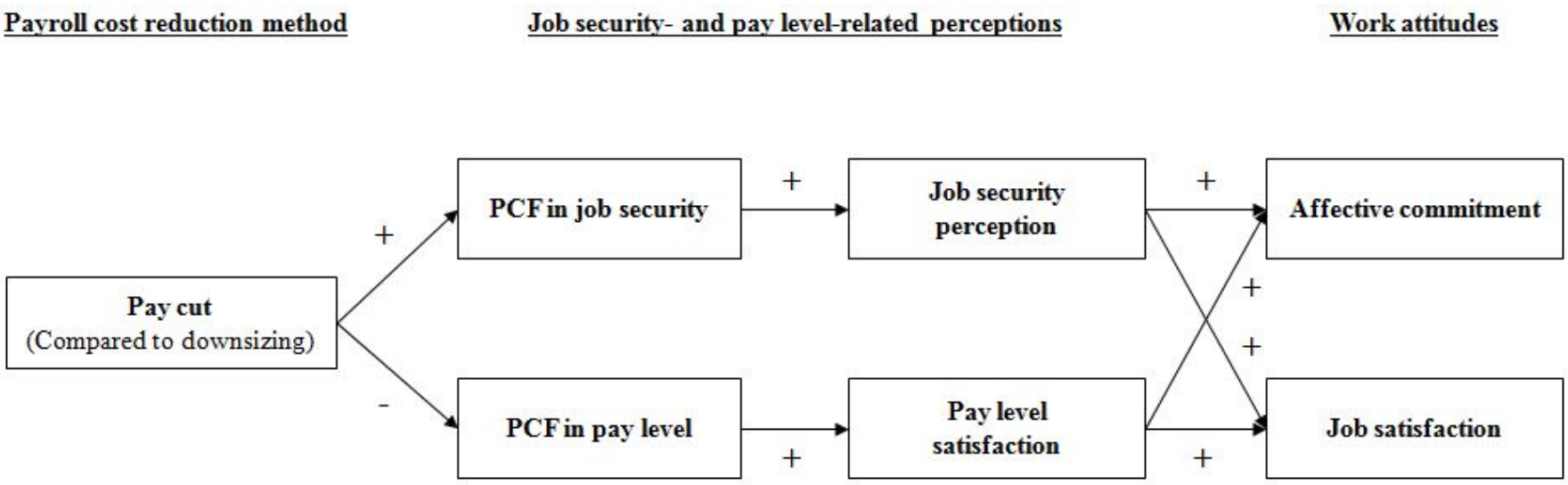
WorldatWork. 2011. ***Salary budget survey: 2010-2011***. Scottsdale, AZ; WorldatWork.

WorldatWork. 2012. ***Salary budget survey: 2011-2012***. Scottsdale, AZ; WorldatWork.

Yoon, Y. J. 2014. Investments in training and downsizing versus reducing pay. ***Academy of Management Proceedings***, *11272*

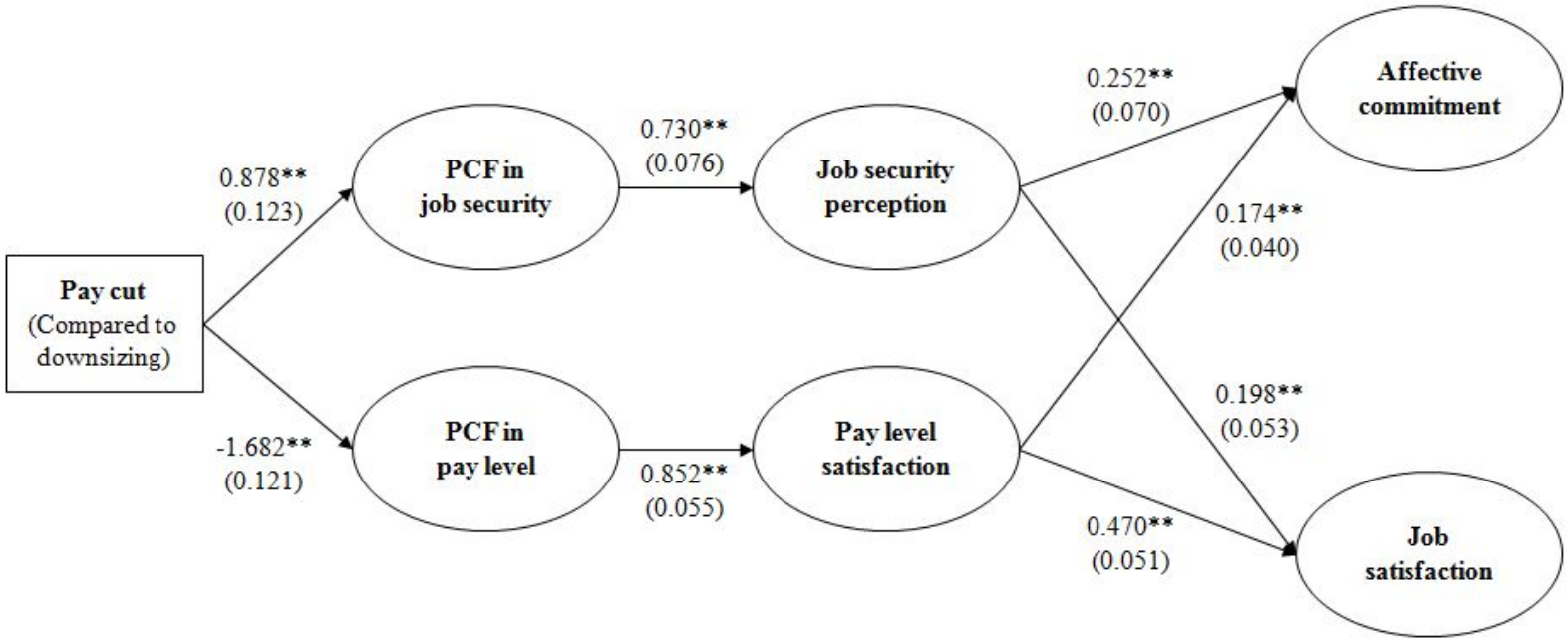
Zingheim, P. K., & Schuster, J. R. 2002. In a downturn do you cut pay, slash the workforce or protect precious talent? ***Strategy & Leadership***, 30: 23–26.

Figure 1A. Empirical Model (Study 1 of Paper 1)



Note. PCF: Psychological Contract Fulfillment

Figure 1B. SEM Results (Study 1 of Paper 1)



*** p < 0.01, * p < 0.05, † p < 0.10, PCF: psychological contract fulfillment*

Note 1. Standard errors are shown in parentheses.

Note 2. Variables in circles and rectangles represent latent and observed variables, respectively.

Note 3. Factor loadings for items within latent variables are not shown in this figure.

Figure 1C. Empirical Model (Study 2 of Paper 1)

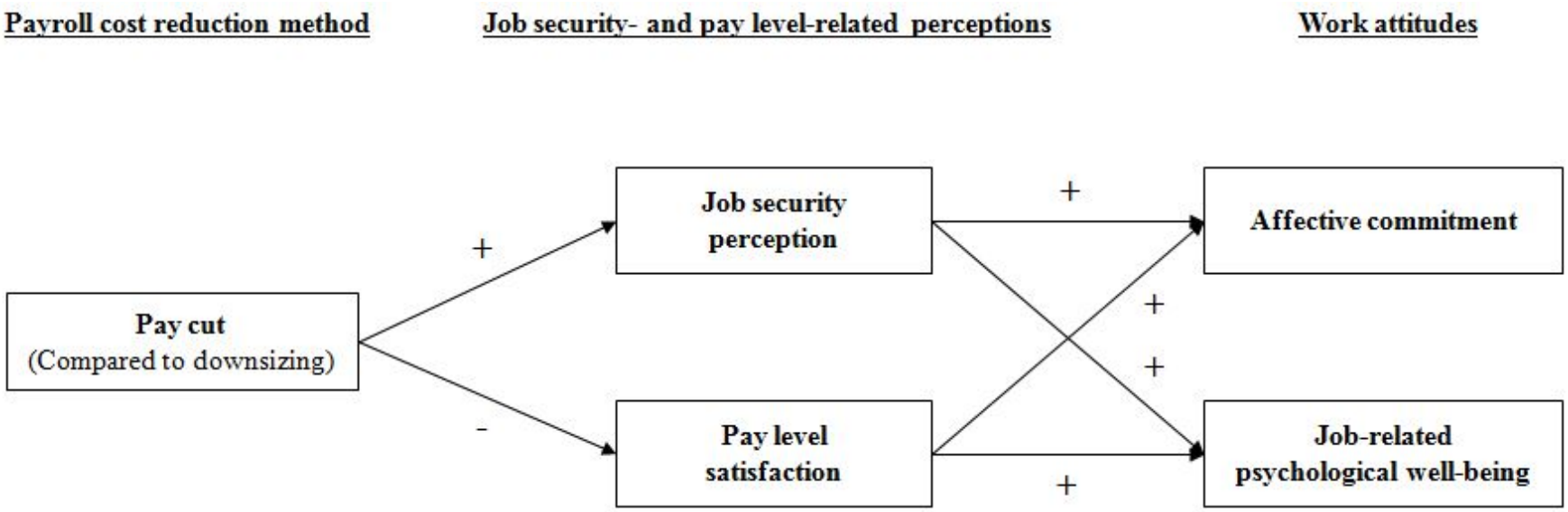
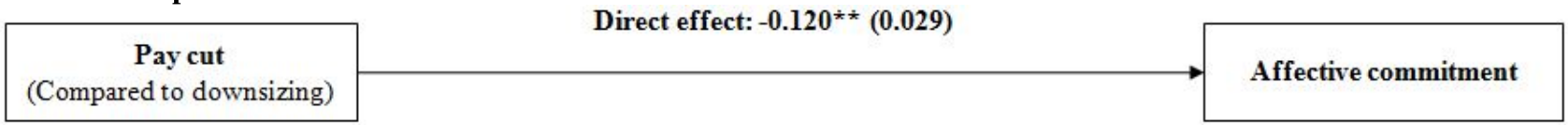
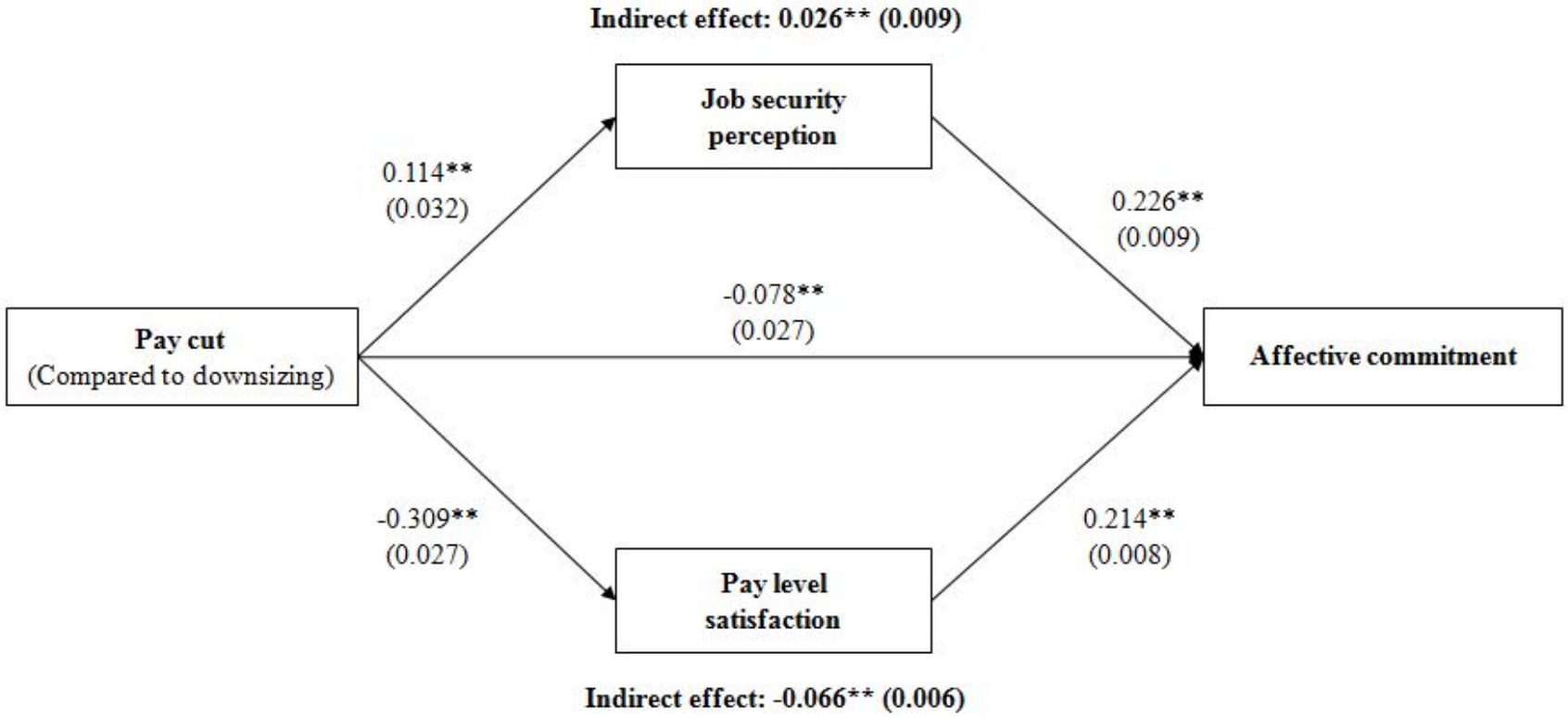


Figure 1D. Direct/Indirect model comparing the effects of pay cut and downsizing on affective commitment (Study 2 of Paper 1)

Direct effects comparison result



Indirect effects comparison result



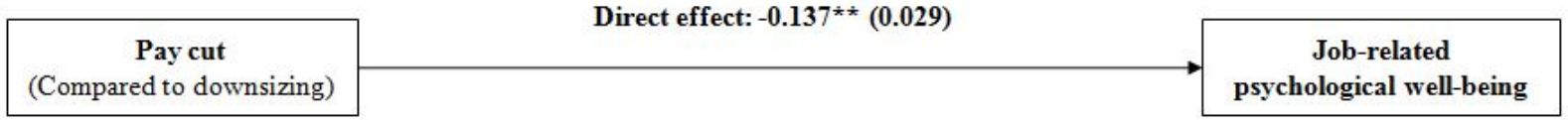
*** p < 0.01, * p < 0.05*

Note 1. Affective commitment, job security perception, and pay level satisfaction were standardized in estimating coefficients

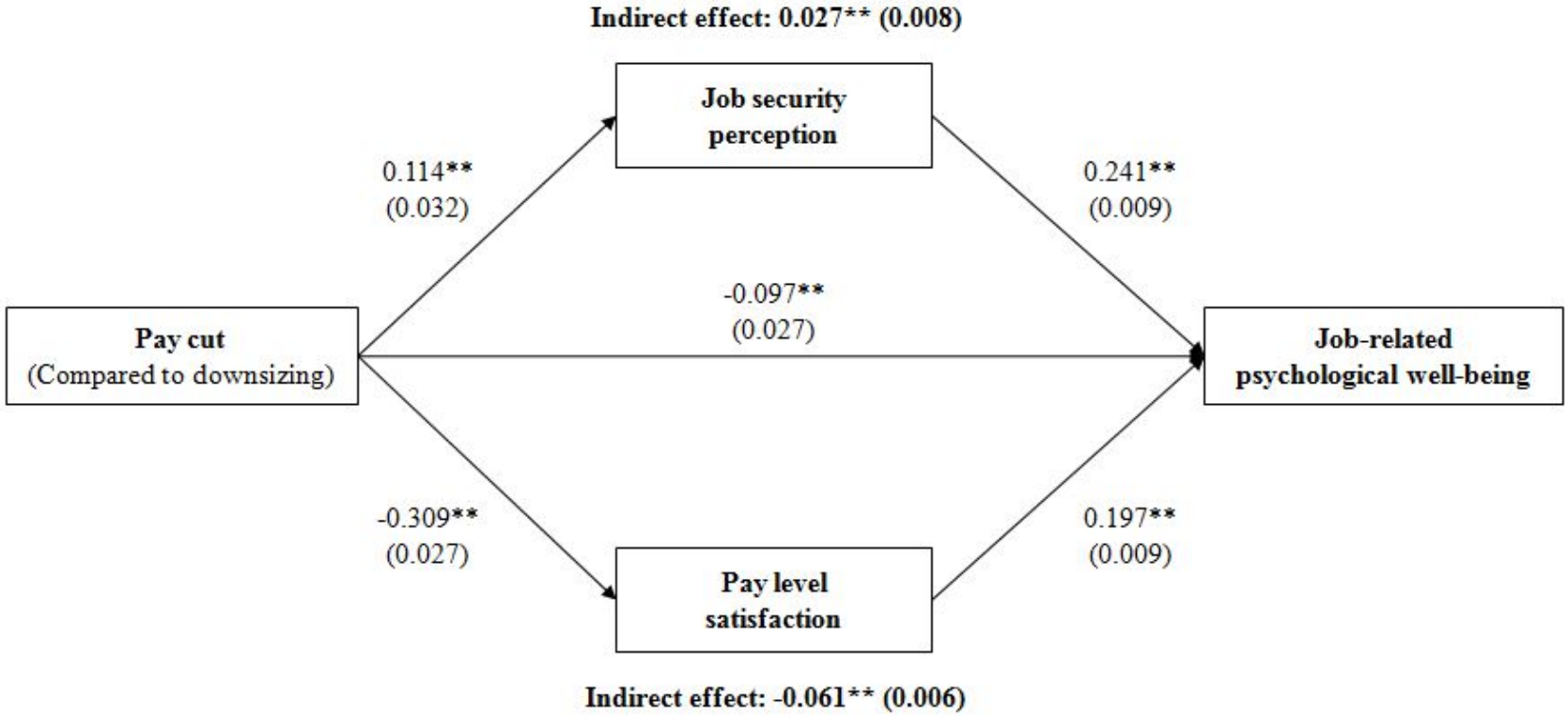
Note 2. Standard errors are shown in parentheses.

Figure 1E. Direct/Indirect model comparing the effects of pay cut and downsizing on job-related PWB[1)] (Study 2 of Paper 1)

Direct effects comparison result



Indirect effects comparison result



*** p < 0.01, * p < 0.05,* *1) PWB: psychological well-being*

Note 1. Job-related psychological well-being, job security perception, and pay level satisfaction were standardized in estimating coefficients.

Note 2. Standard errors are shown in parentheses.

Figure 2A. Hypothesized Model (Paper 2)

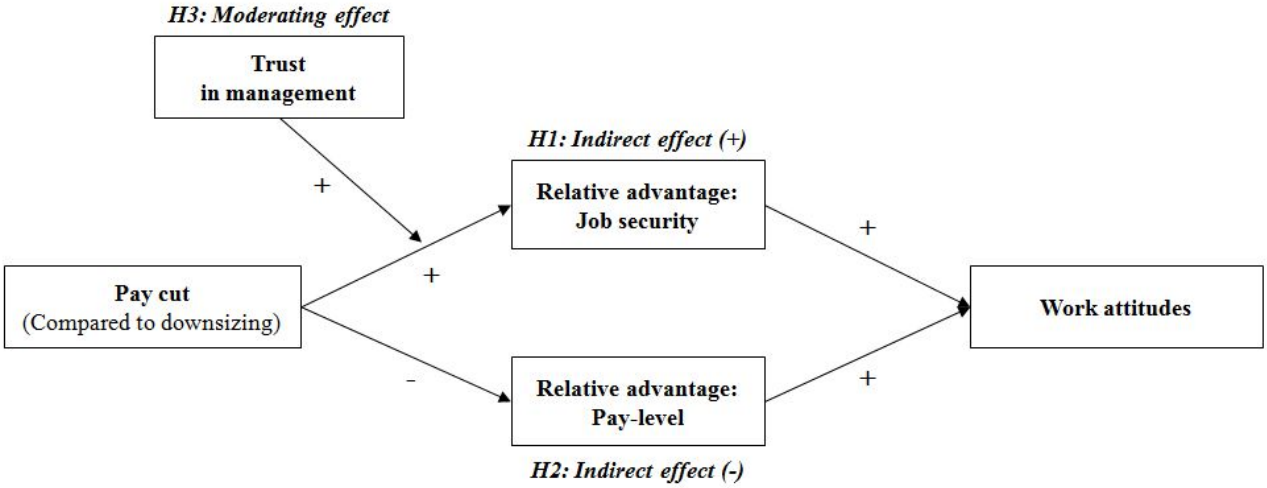
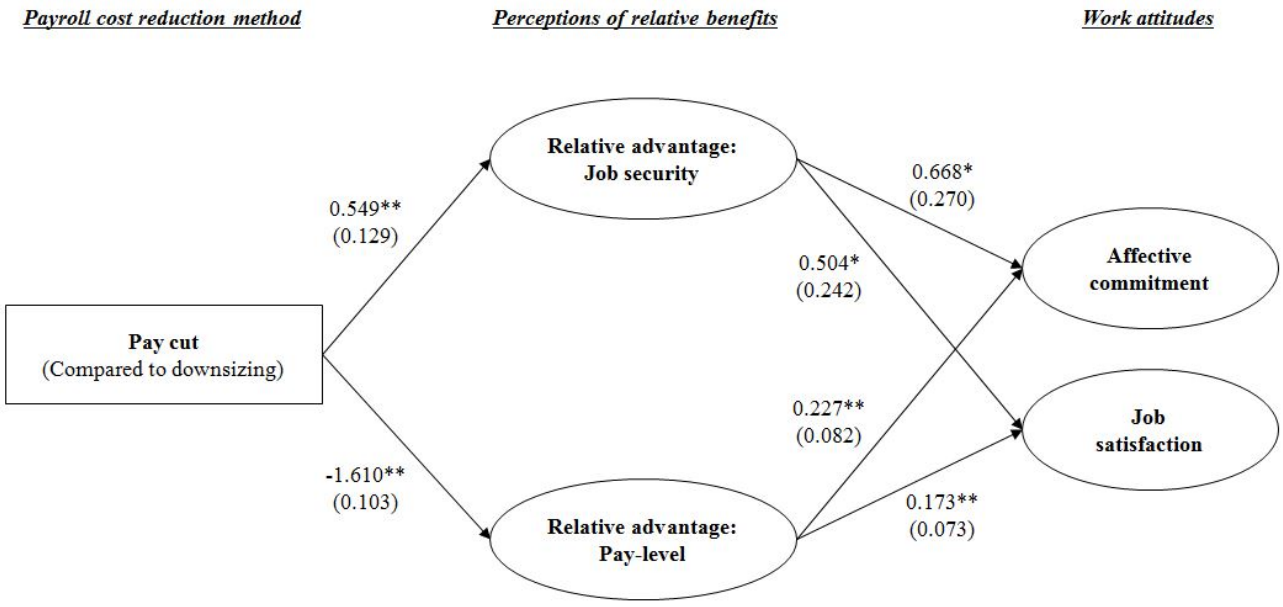


Figure 2B. Within-Level SEM Results (Model 1) (Study 1 of Paper 2)



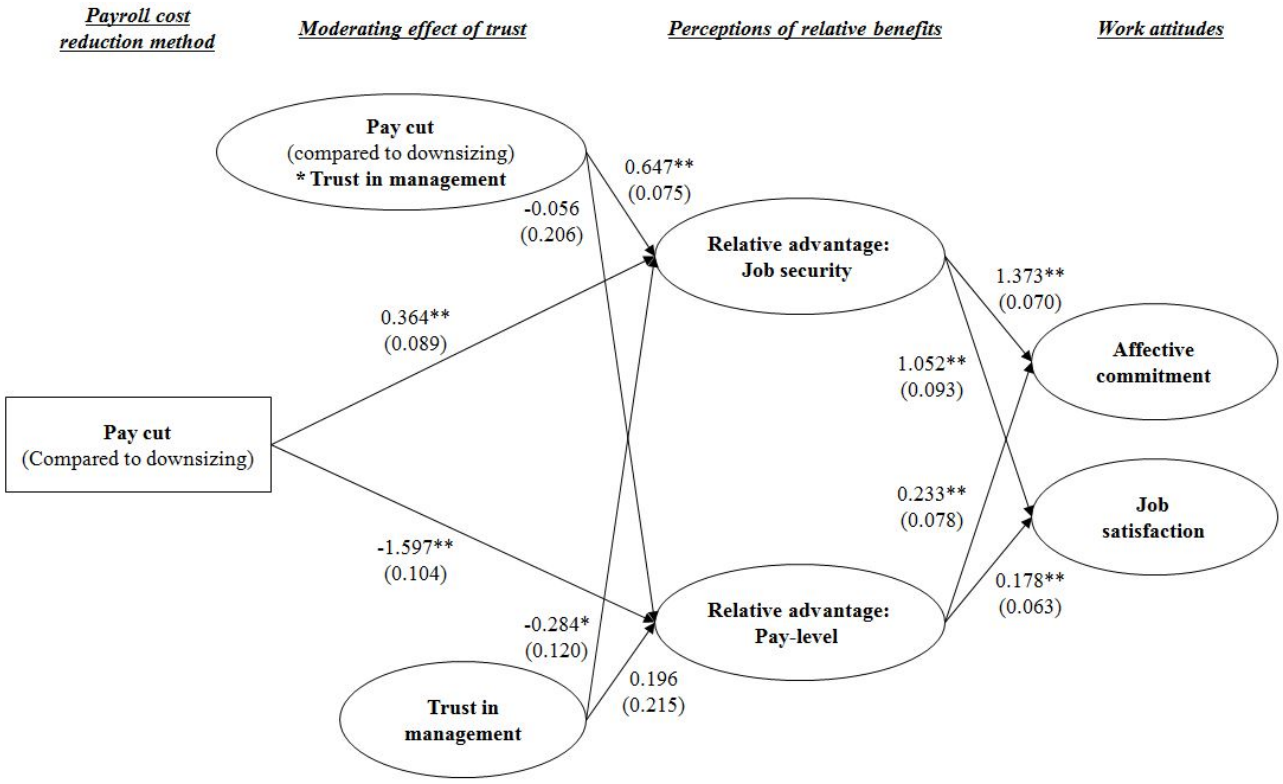
*** p < 0.01, * p < 0.05*

Note 1. Standard errors are shown in parentheses.

Note 2. Variables in circles and rectangles represent latent and observed variables, respectively.

Note 3. Factor loadings for items within latent variables are not shown in this figure.

Figure 2C. Cross-Level SEM Results (Model 2) (Study 1 of Paper 2)



*** p < 0.01, * p < 0.05*

Note 1. Standard errors are shown in parentheses.

Note 2. Trust in management is the only cross-level (between-participants) variable in the model.

Note 3. Variables in circles and rectangles represent latent and observed variables, respectively.

Note 4. Factor loadings for items within latent variables are not shown in this figure.

Figure 3A. Hypothesized Model (Study 3 of Paper 3)

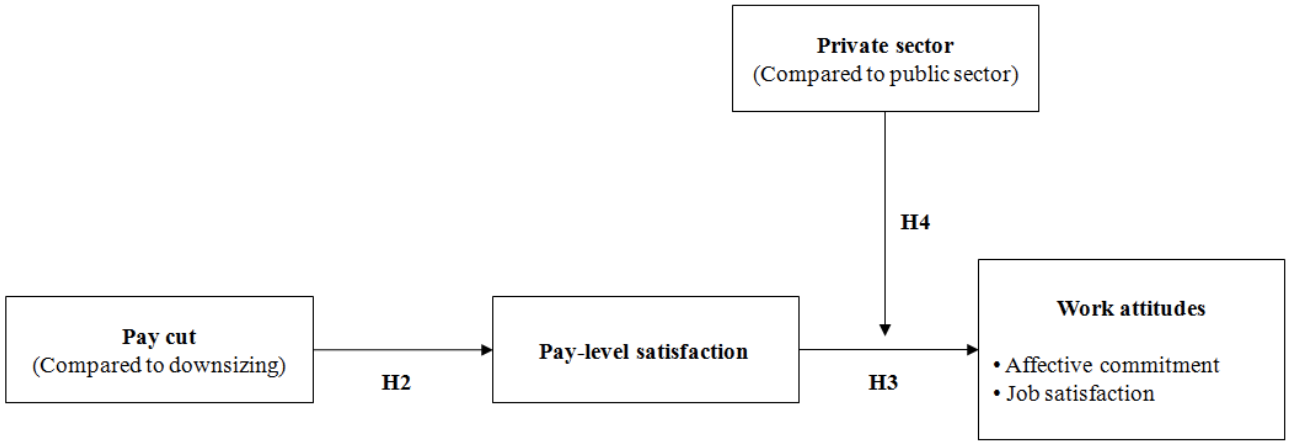


Table 1A. Means, Standard Deviations and Correlations of the Variables (Study 1 of Paper 1)

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9
1. AC1	2.336	1.079									
2. AC2	2.277	1.098	0.566								
3. AC3	2.262	1.009	0.603	0.763							
4. JSat1	2.316	1.020	0.391	0.471	0.502						
5. JSat2	2.539	1.028	0.504	0.485	0.563	0.700					
6. JSat3	2.281	0.990	0.502	0.545	0.610	0.754	0.702				
7. JSP1	2.473	1.130	0.197	0.302	0.290	0.183	0.144	0.172			
8. JSP2	2.410	1.131	0.205	0.281	0.294	0.173	0.133	0.142	0.879		
9. JSP3	2.438	1.170	0.175	0.278	0.278	0.166	0.129	0.147	0.866	0.884	
10. JSP4	2.465	1.230	0.163	0.264	0.271	0.195	0.139	0.163	0.848	0.847	0.845
11. JSP5	2.426	1.152	0.175	0.182	0.167	0.112	0.087	0.094	0.589	0.627	0.615
12. PLS1	2.555	1.174	0.196	0.163	0.231	0.551	0.469	0.436	-0.068	-0.066	-0.066
13. PLS2	2.594	1.239	0.138	0.060	0.132	0.400	0.289	0.266	-0.086	-0.088	-0.082
14. PLS3	2.598	1.210	0.218	0.137	0.221	0.510	0.424	0.409	-0.035	-0.011	-0.019
15. PCF-JSec1	3.133	1.273	0.161	0.268	0.257	0.146	0.125	0.123	0.526	0.526	0.527
16. PCF-JSec2	3.043	1.284	0.193	0.317	0.246	0.172	0.089	0.154	0.597	0.574	0.577
17. PCF-JSec3	2.984	1.271	0.210	0.318	0.257	0.170	0.114	0.175	0.592	0.583	0.601
18. PCF-PL1	2.680	1.274	0.178	0.187	0.218	0.459	0.366	0.367	-0.101	-0.069	-0.103
19. PCF-PL2	2.730	1.278	0.146	0.188	0.198	0.457	0.332	0.373	-0.099	-0.116	-0.089
20. PCF-PL3	2.703	1.307	0.110	0.126	0.163	0.459	0.336	0.353	-0.138	-0.148	-0.151
21. Pay cut *(vs. downsizing)*	0.500	0.501	0.000	0.068	0.027	-0.257	-0.198	-0.158	0.308	0.301	0.308

Variables	10	11	12	13	14	15	16	17	18	19	20
11. JSP5	0.615										
12. PLS1	-0.054	0.016									
13. PLS2	-0.025	-0.049	0.649								
14. PLS3	-0.006	0.019	0.873	0.607							
15. PCF-JSec1	0.561	0.330	-0.149	-0.097	-0.118						
16. PCF-JSec2	0.608	0.401	-0.123	-0.092	-0.112	0.757					
17. PCF-JSec3	0.639	0.417	-0.120	-0.089	-0.101	0.699	0.769				
18. PCF-PL1	-0.090	-0.003	0.678	0.471	0.661	-0.099	-0.104	-0.069			
19. PCF-PL2	-0.102	-0.076	0.741	0.520	0.733	-0.050	-0.060	-0.036	0.754		
20. PCF-PL3	-0.155	-0.072	0.768	0.521	0.725	-0.134	-0.107	-0.126	0.859	0.814	
21. Pay cut *(vs. downsizing)*	0.334	0.180	-0.654	-0.474	-0.618	0.332	0.357	0.382	-0.658	-0.610	-0.713

N = 256 (in 128 individuals)

Note 1 . All correlations with absolute values larger than 0.124 are significant at p < 0.05 level.

Note 2. Correlations are Pearson correlations (not accounting for multi-leveled nature).

Note 3. AC: affective commitment, JSat: job satisfaction, JSP: job security perception, PLS: pay level satisfaction, PCF-JSec: psychological contract fulfillment in job security, PCF-PL: psychological contract fulfillment in pay level.

Table 1B. Indirect Effects Comparison (Study 1 of Paper 1)

		Paths		Indirect effect	95% CI
Pay cut (compared to downsizing) → **Affective commitment**	**P1**	**Through job security-related perceptions**	PC → PCF-JSec → JSP → AC	**0.162**** (0.052)	0.059, 0.264
	P2	**Through pay level-related perceptions**	PC → PCF-PL → PLS → AC	**-0.249**** (0.062)	-0.371, -0.128
Pay cut (compared to downsizing) → **Job satisfaction**	**P3**	**Through job security-related perceptions**	PC → PCF-JSec → JSP → JSat	**0.127**** (0.040)	0.048, 0.205
	P4	**Through pay level-related perceptions**	PC → PCF-PL → PLS → JSat	**-0.674**** (0.098)	-0.865, -0.482

N = 256 (in 128 individuals)

*** p < 0.01, * p < 0.05, † p < 0.10*

Note 1. Indirect effects were calculated based on the SEM results in Figure 1B.

Note 2. Standard errors of indirect effects are shown in parentheses.

Note 3. The estimate of unbiased variance (Goodman, 1960; Krull and McKinnon, 1999) was used in calculating the standard errors of indirect effects.

Note 4. AC: affective commitment, JSat: job satisfaction, JSP: job security perception, PLS: pay level satisfaction, PCF-JSec: psychological contract fulfillment in job security, PCF-PL: psychological contract fulfillment in pay level, PC: pay cut (vs. downsizing).

Table 1C. Means, Standard Deviations and Correlations of the Variables (Study 2 of Paper 1)

Variables	Mean	s.d.	1	2	3	4	5	6	7
1. Affective commitment	3.808	0.809							
2. Job-related PWB	3.941	0.855	0.366						
3. Job security perception	3.426	1.116	0.349	0.319					
4. Pay level satisfaction	3.001	1.124	0.341	0.263	0.227				
5. Pay cut (PC)	0.187	0.390	-0.048	-0.069	-0.030	-0.115			
6. Downsizing (DS)	0.203	0.402	0.013	0.031	-0.035	0.075	-0.242		
7. Both PC and DS	0.190	0.393	-0.101	-0.107	-0.215	-0.091	-0.232	-0.245	
8. Neither PC nor DS	0.420	0.494	0.107	0.114	0.223	0.103	-0.408	-0.429	-0.413
9. Decrease in work hours	0.218	0.413	-0.160	-0.123	-0.150	-0.181	0.061	-0.039	0.140
10. Female	0.554	0.497	0.097	0.031	0.034	0.006	0.027	-0.034	-0.064
11. Married	0.716	0.451	0.047	0.011	-0.013	0.038	0.021	0.002	0.041
12. Temporary status	0.049	0.216	0.020	0.042	-0.095	0.024	-0.045	0.022	-0.041
13. Union member	0.395	0.489	-0.080	-0.110	-0.106	-0.015	0.082	-0.027	0.048
14. Work hours	33.384	9.357	-0.044	-0.129	-0.019	-0.023	0.015	0.034	0.105
15. Autonomy	3.082	0.734	0.334	0.211	0.198	0.234	-0.039	0.030	0.020
16. Workplace size	484.335	1,208.493	-0.022	-0.019	-0.025	0.042	-0.056	0.134	0.060

Variables	8	9	10	11	12	13	14	15
9. Decrease in work hours	-0.128							
10. Female	0.058	-0.077						
11. Married	-0.052	-0.017	-0.050					
12. Temporary status	0.050	-0.019	0.015	-0.048				
13. Union member	-0.081	0.050	-0.016	0.064	-0.041			
14. Work hours	-0.122	0.011	-0.326	0.015	-0.163	0.047		
15. Autonomy	-0.010	-0.138	-0.001	0.062	-0.011	-0.131	0.079	
16. Workplace size	-0.113	0.028	0.005	0.022	0.016	0.081	0.019	0.003

N = 15,366 (in 1,866 workplaces)

Note 1. Correlations with the absolute value of 0.016 or larger are significant at $p < 0.05$ level.

Note 2. Correlations are Pearson correlations (not accounting for multi-leveled nature).

Note 3. Age, education, pay, tenure, occupation, and industry related variables were omitted from the table.

Table 1D. HLM Results (Study 2 of Paper 1)

	Variables	Dependent variable: Job security perception (Standardized)		Dependent variable: Pay level satisfaction (Standardized)	
		Model 1	**Model 2**	**Model 3**	**Model 4**
	Constant	-0.222* (0.104)	-0.397** (0.103)	-0.131 (0.120)	-0.123 (0.120)
Payroll cost reduction methods	Pay cut *(vs. downsizing)*		0.114** (0.032)		-0.309** (0.027)
	Both pay cut and downsizing *(vs. downsizing)*		-0.268** (0.027)		-0.327** (0.026)
	Neither pay cut nor downsizing *(vs. downsizing)*		0.282** (0.029)		0.021 (0.024)
Controls	Individual-level controls	Y	Y	Y	Y
	Organizational-level controls	Y	Y	Y	Y
Model fit	**Pseudo R^2 (within)**	**0.091**	**0.102**	**0.121**	**0.138**
	Pseudo R^2 (between)	**0.287**	**0.404**	**0.404**	**0.474**
	$\Delta \chi^2$ (df, Compared model)		**343.2** **(3, M1)**		**373.7** **(3, M3)**

	Variables	Dependent variable: Affective commitment (Standardized)			Dependent variable: Job-related PWB (Standardized)		
		Model 5	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**
	Constant	-0.807** (0.106)	-0.837** (0.107)	-0.729** (0.100)	-0.212* (0.103)	-0.223* (0.105)	-0.107** (0.098)
Payroll cost reduction methods	Pay cut *(vs. downsizing)*		-0.120** (0.029)	-0.078** (0.027)		-0.137** (0.029)	-0.097** (0.027)
	Both pay cut and downsizing *(vs. downsizing)*		-0.224** (0.026)	-0.091** (0.024)		-0.192** (0.026)	-0.063* (0.025)
	Neither pay cut nor downsizing *(vs. downsizing)*		0.064** (0.024)	-0.003 (0.022)		0.035 (0.025)	-0.038† (0.023)
Indirect factors	Job security perception			0.226** (0.009)			0.241** (0.009)
	Pay level satisfaction			0.214** (0.008)			0.197** (0.009)
Controls	Individual-level controls	Y	Y	Y	Y	Y	Y
	Organizational-level controls	Y	Y	Y	Y	Y	Y
Model fit	**Pseudo R^2 (within)**	**0.121**	**0.130**	**0.218**	**0.090**	**0.096**	**0.181**
	Pseudo R^2 (between)	**0.464**	**0.481**	**0.637**	**0.353**	**0.369**	**0.580**
	$\Delta \chi^2$ (df, Compared model)		**163.7** **(3, M5)**	**1,846.2** **(2, M6)**		**113.8** **(3, M8)**	**1,665.1** **(2, M9)**

N = 15,366 (in 1,866 workplaces)

*** p < 0.01, * p < 0.05, † p < 0.10*

Note. Standard errors are shown in parentheses.

Table 1E. Indirect Effects (Study 2 of Paper 1)

Path						HLM coefficients			
Path	**A**	→	**B**	→	**C**	**A → B**	**B → C** (controlling for A)	**Indirect effect** (A → B → C)	**95% CI for indirect effect**
P1	**PC** (compared to DS)	→	**JSP**	→	**AC**	0.114** (0.032)	0.226** (0.009)	0.026** (0.009)	0.011, 0.040
P2	**PC** (compared to DS)	→	**JSP**	→	**PWB**	0.114** (0.032)	0.241** (0.009)	0.027** (0.008)	0.012, 0.043
P3	**PC** (compared to DS)	→	**PLS**	→	**AC**	-0.309** (0.027)	0.214** (0.008)	-0.066** (0.006)	-0.078, -0.054
P4	**PC** (compared to DS)	→	**PLS**	→	**PWB**	-0.309** (0.027)	0.197** (0.009)	-0.061** (0.006)	-0.073, -0.049

N = 15,366 (in 1,866 workplaces)

*** p < 0.01, * p < 0.05, † p < 0.10*

Note 1. Standard errors are shown in parentheses.

Note 2. JSP, PLS, OC and PWB were standardized in estimating coefficients.

Note 3. PC: Pay cut, DS: Downsizing, JSP: Job security perception, PLS: Pay level satisfaction, AC: Affective commitment, PWB: Job-related psychological well-being

Table 2A. Means, Standard Deviations and Correlations of the Variables (Study 1 of Paper 2)

Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1. Affective commitment 1	2.899	1.143								
2. Affective commitment 2	2.685	1.033	0.527							
3. Affective commitment 3	2.703	0.968	0.617	0.702						
4. Job satisfaction 1	2.873	0.988	0.597	0.644	0.709					
5. Job satisfaction 2	3.181	1.025	0.677	0.456	0.579	0.669				
6. Job satisfaction 3	2.819	0.985	0.591	0.658	0.744	0.791	0.663			
7. Relative advantage: Job security 1	3.004	1.123	0.320	0.408	0.386	0.367	0.249	0.415		
8. Relative advantage: Job security 2	2.815	1.091	0.364	0.422	0.447	0.369	0.271	0.432	0.840	
9. Relative advantage: Job security 3	2.844	1.109	0.335	0.408	0.411	0.373	0.236	0.437	0.873	0.868
10. Relative advantage: Pay-level 1	2.649	1.219	0.136	0.186	0.152	0.313	0.220	0.274	-0.002	-0.003
11. Relative advantage: Pay-level 2	2.674	1.222	0.179	0.206	0.194	0.345	0.242	0.295	0.043	0.034
12. Relative advantage: Pay-level 3	2.714	1.260	0.119	0.126	0.115	0.301	0.206	0.236	0.003	0.022
13. Trust in management 1	3.478	0.959	0.244	0.255	0.330	0.302	0.318	0.342	0.009	0.081
14. Trust in management 2	3.529	1.080	0.285	0.316	0.360	0.346	0.307	0.367	0.055	0.111
15. Trust in management 3	3.500	1.214	0.155	0.184	0.167	0.238	0.284	0.252	-0.044	-0.004
16. Trust in management 4	3.471	1.080	0.248	0.205	0.225	0.209	0.218	0.238	0.011	0.071
17. Trust in management 5	3.471	0.996	0.253	0.258	0.281	0.320	0.308	0.343	0.060	0.100
18. Trust in management 6	3.551	1.017	0.255	0.228	0.307	0.309	0.256	0.361	0.113	0.171
19. Pay cut *(compared to downsizing)*	0.500	0.501	-0.006	0.116	0.098	-0.107	-0.071	0.022	0.249	0.263

Variables	9	10	11	12	13	14	15	16	17	18
10. Relative advantage: Pay-level 1	0.019									
11. Relative advantage: Pay-level 2	0.048	0.923								
12. Relative advantage: Pay-level 3	0.025	0.936	0.905							
13. Trust in management 1	0.070	0.206	0.189	0.177						
14. Trust in management 2	0.102	0.175	0.167	0.141	0.857					
15. Trust in management 3	0.015	0.087	0.069	0.070	0.556	0.608				
16. Trust in management 4	0.031	0.118	0.114	0.083	0.645	0.708	0.491			
17. Trust in management 5	0.113	0.158	0.133	0.122	0.746	0.755	0.496	0.733		
18. Trust in management 6	0.154	0.160	0.128	0.149	0.691	0.681	0.454	0.697	0.770	
19. Pay cut *(compared to downsizing)*	0.259	-0.652	-0.642	-0.666	0.000	0.000	0.000	0.000	0.000	0.000

N = 276 (in 138 individuals)

Note 1 . All correlations with absolute values larger than 0.119 are significant at $p < 0.05$ level.

Note 2. Correlations are Pearson correlations (not accounting for multi-leveled nature).

Table 2B. Split Sample HLM Results (Study 1 of Paper 2)

Variables	High Trust Sample[1)]		Low Trust Sample[1)]	
	Model A1: Affective commitment	**Model B1: Job satisfaction**	**Model A2: Affective commitment**	**Model B2: Job satisfaction**
Constant	0.008 (0.103)	0.203* (0.100)	-0.197 (0.115)	-0.149 (0.128)
Pay cut *(vs. downsizing)*	0.456** (0.142)	0.133 (0.140)	-0.279* (0.121)	-0.470** (0.147)
N	**162** (in 81 individuals)		**114** (in 57 individuals)	

*** p < 0.01, * p < 0.05*

Note 1. Standard errors are shown in parentheses.

Note 2. Dependent variables (affective commitment and job satisfaction) were standardized in estimating coefficients.

Note 3. High and low trust samples were divided through mean split.

1) Samples were divided through a mean-split.

Table 2C. Means, Standard Deviations and Correlations of the Variables (Study 2A of Paper 2)

Variables	Mean	s.d.	1	2	3	4	5	6
1. Affective commitment	3.809	0.809						
2. Pay cut (PC)	0.187	0.390	-0.054					
3. Downsizing (DS)	0.204	0.403	0.017	-0.242				
4. Both PC and DS	0.190	0.393	-0.099	-0.233	-0.245			
5. Neither PC nor DS	0.419	0.493	0.108	-0.407	-0.429	-0.412		
6. Trust in management	3.336	0.983	0.577	-0.061	0.016	-0.129	0.138	
7. Decrease in work hours	0.220	0.414	-0.161	0.061	-0.043	0.143	-0.126	-0.193
8. Female	0.555	0.497	0.098	0.029	-0.032	-0.064	0.054	0.076
9. Married	0.715	0.451	0.046	0.020	0.003	0.040	-0.050	-0.003
10. Temporary status	0.050	0.217	0.023	-0.045	0.023	-0.044	0.051	0.064
11. Union member	0.397	0.489	-0.082	0.079	-0.025	0.051	-0.083	-0.157
12. Work hours	33.380	9.346	-0.048	0.013	0.029	0.106	-0.118	-0.102
13. Autonomy	3.083	0.736	0.334	-0.043	0.033	0.021	-0.009	0.305
14. Workplace size	477.590	1,197.370	-0.020	-0.056	0.134	0.056	-0.110	-0.063

Variables	7	8	9	10	11	12	13
8. Female	-0.077						
9. Married	-0.022	-0.050					
10. Temporary status	-0.023	0.016	-0.048				
11. Union member	0.048	-0.016	0.061	-0.044			
12. Work hours	0.010	-0.328	0.015	-0.163	0.046		
13. Autonomy	-0.135	-0.001	0.064	-0.011	-0.130	0.079	
14. Workplace size	0.024	0.005	0.019	0.014	0.085	0.017	0.005

N = 15,746 (in 1,871 workplaces)

Note 1. Correlations with the absolute value of 0.016 or larger are significant at $p < 0.05$ level.

Note 2. Correlations are Pearson correlations (not accounting for multi-leveled nature).

Note 3. Pay, age, tenure, education, occupation, and industry related variables were omitted from the table.

Table 2D. Split Sample HLM Results (Study 2A of Paper 2)

Variables		Affective commitment (Standardized)	
		High Trust Sample[1)]	**Low Trust Sample[1)]**
	Constant	-0.245* (0.111)	-1.223** (0.163)
Payroll cost Reduction methods	Pay cut *(vs. downsizing)*	-0.029 (0.031)	-0.175** (0.036)
	Both pay cut and downsizing *(vs. downsizing)*	-0.085** (0.030)	-0.195** (0.036)
	Neither pay cut nor downsizing *(vs. downsizing)*	0.057* (0.025)	-0.002 (0.031)
Controls	Individual-level controls	Y	Y
	Workplace-level controls	Y	Y
N		**7,794** (in 1,735 workplaces)	**7,952** (in 1,647 workplaces)

Total N = 15,746 (in 1,871 workplaces)

*** p < 0.01, * p < 0.05*

Note. Standard errors are shown in parentheses.

1) Samples were divided through a mean-split.

Table 2E. Sample Size by Country and Trust (Study 2B of Paper 2)

Country	High Trust Sample[1)]	Low Trust Sample[2)]	Total
Argentina	739 (4.67%)	629 (3.97%)	1,368 (8.64%)
Belarus	980 (6.19%)	778 (4.91%)	1,758 (11.10%)
Belgium	629 (3.97%)	447 (2.82%)	1,076 (6.79%)
Brazil	1,086 (6.86%)	748 (4.72%)	1,834 (11.58%)
Chile	142 (0.90%)	100 (0.63%)	242 (1.53%)
Colombia	285 (1.80%)	178 (1.12%)	463 (2.92%)
Czech Republic	208 (1.31%)	179 (1.13%)	387 (2.44%)
Finland	151 (0.95%)	105 (0.66%)	256 (1.62%)
India	683 (4.31%)	420 (2.65%)	1,103 (6.96%)
Kazakhstan	281 (1.77%)	146 (0.92%)	427 (2.70%)
Mexico	621 (3.92%)	401 (2.53%)	1,022 (6.45%)
Netherlands	1,597 (10.08%)	886 (5.59%)	2,483 (15.68%)
Russian Federation	581 (3.67%)	397 (2.51%)	978 (6.17%)
South Africa	500 (3.16%)	452 (2.85%)	952 (6.01%)
Sweden	357 (2.25%)	293 (1.85%)	650 (4.10%)
Ukraine	214 (1.35%)	150 (0.95%)	364 (2.30%)
United Kingdom	204 (1.29%)	273 (1.72%)	477 (3.01%)
N	**9,258 (58.45%)**	**6,582 (41.55%)**	**15,840 (100.00%)**

1) Participants in this group indicated that they trust the management in organizations that they work for.

2) Participants in this group indicated that they do not trust the management in organizations that they work for.

Table 2F. Means, Standard Deviations and Correlations of the Variables (Study 2B of Paper 2)

Variables	Mean	s.d.	1	2	3	4	5	6
1. Job satisfaction	3.404	1.185						
2. Pay cut (PC)	0.274	0.446	-0.025					
3. Downsizing (DS)	0.184	0.387	0.002	-0.291				
4. Both PC and DS	0.187	0.390	-0.095	-0.295	-0.228			
5. Neither PC nor DS	0.355	0.479	0.099	-0.456	-0.352	-0.356		
6. Trust in management (1 = Yes, 0 = No)	0.584	0.493	0.337	-0.027	-0.010	-0.123	0.134	
7. Sector: Private	0.701	0.458	0.002	-0.018	0.040	0.024	-0.035	0.020
8. Age	34.288	9.448	0.106	0.015	-0.013	0.045	-0.040	0.013
9. Permanent status	0.767	0.423	0.023	-0.043	0.047	0.020	-0.014	0.012
10. Female	0.434	0.496	-0.033	0.035	-0.015	0.026	-0.042	-0.029
11. Married	0.505	0.500	0.040	-0.014	0.024	-0.007	-0.001	0.017
12. Work hours	39.998	6.478	-0.042	-0.051	0.035	-0.004	0.022	-0.024
13. Organization tenure	13.428	9.731	0.095	0.016	-0.007	0.049	-0.049	0.007
14. Pay level[1)]	1.001	0.400	0.137	-0.076	0.056	-0.069	0.081	0.081

Variables	7	8	9	10	11	12	13
8. Age	-0.064						
9. Permanent status	0.181	0.149					
10. Female	-0.096	-0.031	-0.027				
11. Married	-0.018	0.302	0.044	-0.114			
12. Work hours	0.141	-0.099	0.007	-0.212	0.027		
13. Organization tenure	-0.046	0.905	0.155	-0.029	0.266	-0.104	
14. Pay level[1)]	0.130	0.296	0.205	-0.133	0.117	-0.178	0.248

N = 15,840 (in 17 countries)

1) In $\log_{10}$ of United State dollars

Note 1. Correlations with the absolute value of 0.016 or larger are significant at $p < 0.05$ level.

Note 2. Correlations are Pearson correlations (not accounting for multi-leveled nature).

Note 3. Industry, organization size and occupation related variables were omitted from the table.

Table 2G. Split Sample HLM Results (Study 2B of Paper 2)

Variables		Job Satisfaction (Standardized)	
		High Trust Sample[1)]	**Low Trust Sample[2)]**
	Constant	-0.000 (0.191)	-0.692* (0.273)
Payroll cost Reduction methods	Pay cut *(vs. downsizing)*	-0.049 (0.028)	-0.093* (0.036)
	Both pay cut and downsizing *(vs. downsizing)*	-0.173** (0.032)	-0.136** (0.037)
	Neither pay cut nor downsizing *(vs. downsizing)*	0.075** (0.026)	0.041 (0.036)
Controls	Individual characteristics	Y	Y
	Organization characteristics	Y	Y
N		**9,258**	**6,582**

Total N = 15,840 (in 17 countries)

*** p < 0.01, * p < 0.05*

Note. Standard errors are shown in parentheses.

1) Participants in this group indicated that they trust the management in organizations that they work for.

2) Participants in this group indicated that they do not trust the management in organizations that they work for.

Table 3A. Means, Standard Deviations and Correlations of the Variables (Study 1 of Paper 3)

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Affective commitment	3.12	0.52										
2. Job satisfaction	3.25	0.61	0.50									
3. Pay cut (PC)	0.07	0.25	0.01	-0.01								
4. Downsizing (DS)	0.42	0.49	-0.06	-0.04	-0.23							
5. Both PC and DS	0.16	0.36	-0.07	-0.07	-0.12	-0.37						
6. Neither PC nor DS	0.35	0.48	0.10	0.10	-0.20	-0.63	-0.32					
7. Private sector (*vs. public sector*)	0.62	0.48	-0.04	-0.03	-0.14	0.09	-0.12	0.07				
8. Organization size: less than 99[1)]	0.66	0.48	0.07	-0.02	0.07	-0.12	-0.03	0.12	0.09			
9. Organization size: 100 to 499[1)]	0.19	0.40	-0.03	0.00	-0.05	0.08	0.00	-0.07	-0.03	-0.68		
10. Organization size: 500 or more[1)]	0.15	0.36	-0.06	0.02	-0.04	0.07	0.04	-0.08	-0.09	-0.58	-0.21	
11. Female	0.53	0.50	0.07	0.05	0.03	-0.06	-0.03	0.07	-0.16	0.09	-0.06	-0.06
12. Job level: Senior mgmt	0.09	0.28	0.15	0.08	0.03	0.02	0.02	-0.05	0.04	-0.04	0.04	0.02
13. Job level: Mid mgmt	0.17	0.37	0.04	0.01	0.02	-0.00	0.07	-0.06	-0.06	-0.06	0.03	0.04
14. Job level: Supervisor	0.12	0.32	-0.02	-0.03	-0.04	0.05	-0.01	-0.03	0.01	-0.01	0.01	0.00
15. Job level: Employee	0.63	0.48	-0.11	-0.04	-0.01	-0.04	-0.05	0.09	0.02	0.07	-0.05	-0.05
16. Work hours	33.49	11.49	0.00	-0.01	0.01	0.06	0.06	-0.12	0.05	-0.21	0.12	0.15
17. Permanent employee	0.86	0.35	0.02	0.01	-0.02	0.06	0.05	-0.09	0.01	-0.12	0.09	0.06
18. Org tenure (in months)	125.18	118.36	0.03	0.01	0.04	0.02	0.12	-0.13	-0.25	-0.12	0.10	0.05
19. Union member	0.44	0.50	-0.07	-0.02	0.09	0.00	0.11	-0.13	-0.48	-0.18	0.14	0.09
20. Married	0.67	0.47	0.08	0.05	0.04	0.00	0.06	-0.07	-0.12	-0.09	0.06	0.05
21. Age	40.43	11.78	0.11	0.05	0.04	-0.06	0.06	-0.00	-0.23	-0.04	0.05	-0.00
22. Log(Hourly earnings)	2.94[2)]	0.58	0.10	0.08	0.06	0.02	0.08	-0.12	-0.23	-0.16	0.08	0.13
23. Log(Weekly income)	6.37[3)]	0.77	0.07	0.05	0.06	0.05	0.10	-0.16	-0.16	-0.24	0.13	0.18

Variables	11	12	13	14	15	16	17	18	19	20	21	22
12. Job level: Senior mgmt	-0.11											
13. Job level: Mid mgmt	-0.05	-0.14										
14. Job level: Supervisor	-0.03	-0.11	-0.16									
15. Job level: Employee	0.12	-0.40	-0.58	-0.48								
16. Work hours	-0.43	0.27	0.15	0.06	-0.31							
17. Permanent employee	-0.09	0.10	0.13	0.05	-0.19	0.27						
18. Org tenure (in months)	-0.12	0.12	0.18	0.06	-0.24	0.16	0.29					
19. Union member	0.05	-0.09	0.04	0.01	0.02	0.04	0.14	0.37				
20. Married	-0.07	0.12	0.14	0.01	-0.18	0.10	0.24	0.29	0.15			
21. Age	-0.07	0.14	0.10	0.00	-0.16	0.08	0.21	0.53	0.23	0.49		
22. Log(Hourly earnings)	-0.11	0.21	0.23	-0.02	-0.29	0.10	0.20	0.31	0.21	0.27	0.28	
23. Log(Weekly income)	-0.30	0.28	0.26	0.03	-0.38	0.63	0.32	0.33	0.21	0.26	0.26	0.82

N = 4,359

Correlations with the absolute value larger than 0.03 are significant at p < 0.05 level

Region, industry, occupation and education level control variables are not reported in this table.

1) In number of employees. 2) The amount equals to 18.9 Euros. 3) The amount equals to 585.8 Euros.

Table 3B. Sample Size by Payroll Cost Reduction Method and Sector (Study 1 of Paper 3)

Payroll cost reduction method	Sector		
	Private	Public	Total
Pay cut	113 (2.59%)	188 (4.31%)	301 (6.91%)
Downsizing	1,242 (28.49%)	594 (13.63%)	1,836 (42.12%)
Both pay cut and downsizing	335 (7.69%)	352 (8.08%)	687 (15.76%)
Neither pay cut nor downsizing	1,029 (23.61%)	506 (11.61%)	1,535 (35.21%)
Total	2,719 (62.38%)	1,640 (37.62%)	4,359 (100.00%)

Table 3C. OLS Model Predicting Work Attitudes (Study 1 of Paper 3)

Variables		Dependent variables					
		Affective commitment (Standardized)			Job satisfaction (Standardized)		
		Model A1	Model A2	Model A3	Model B1	Model B2	Model B3
	Constant	-0.45 (0.30)	-0.52† (0.30)	-0.54† (0.30)	-0.30 (0.30)	-0.39 (0.31)	-0.38 (0.31)
Payroll cost reduction	Pay cut *(vs. downsizing)*		-0.01 (0.06)	0.13 (0.08)		-0.08 (0.06)	0.09 (0.08)
	Both pay cut and downsizing *(vs. downsizing)*		-0.14** (0.04)	-0.08 (0.07)		-0.15** (0.05)	-0.15* (0.07)
	Neither pay cut nor downsizing *(vs. downsizing)*		0.17** (0.03)	0.17** (0.06)		0.17** (0.04)	0.14* (0.06)
Moderator	Private sector *(vs. public sector)*		-0.02 (0.05)	0.01 (0.06)		-0.01 (0.05)	0.01 (0.06)
Interaction effect	Pay cut * Private sector			-0.34** (0.13)			-0.44** (0.13)
	Both pay cut and downsizing * Private sector			-0.10 (0.09)			0.00 (0.09)
	Neither pay cut nor downsizing * Private sector			0.00 (0.07)			0.04 (0.07)
Controls	Region	Y	Y	Y	Y	Y	Y
	Industry	Y	Y	Y	Y	Y	Y
	Occupation	Y	Y	Y	Y	Y	Y
	Other characteristics	Y	Y	Y	Y	Y	Y
Model fit	R^2 (F)	0.08** (8.05)	0.09** (8.54)	0.09** (8.22)	0.04** (3.71)	0.05** (4.59)	0.05** (4.60)
	ΔR^2		0.01**	0.002*		0.01**	0.003**

N = 4,359

*† p < 0.10, * p < 0.05, ** p < 0.01*

Standard errors are shown in parentheses.

Table 3D. Split Sample OLS Results (Study 1 of Paper 3)

Work attitude	Sector	
	Private	Public
Affective commitment (Standardized)	Pay-reduced employees < Survivors of downsizing Coefficient of pay cut (*vs. downsizing*) = -0.20*[1)] (SE = 0.10, p = 0.03)	Pay-reduced employees > Survivors of downsizing Coefficient of pay cut (*vs. downsizing*) = 0.14 (SE = 0.08, p = 0.11)
Job satisfaction (Standardized)	Pay-reduced employees < Survivors of downsizing Coefficient of pay cut (*vs. downsizing*) = -0.35** (SE = 0.10, p = 0.00)	Pay-reduced employees > Survivors of downsizing Coefficient of pay cut (*vs. downsizing*) = 0.10 (SE = 0.09, p = 0.24)
N	2,719	1,640

*† p < 0.10, * p < 0.05, ** p < 0.01*

All the control variables in Appendix 3A were entered in this comparison model.

1) For example, this indicates that within the private sector, affective commitment of employees who survived downsizing was higher than that of employees whose pay was cut by 0.20 standardized value.

Table 3E. Means, Standard Deviations and Correlations of the Variables (Study 2 of Paper 3)

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Threat to pay work value[1)]	3.74	1.22										
2. Threat to altruistic work value[1)]	2.63	1.04	-0.07									
3. Pay cut (*vs. downsizing*)[1)]	0.50	0.50	0.53	-0.04								
4. Pay work value	4.04	0.73	0.06	-0.15	0.00							
5. Altruistic work value	2.81	1.08	0.03	0.39	0.00	-0.13						
6. Private sector (*vs. public sector*)	0.63	0.48	-0.03	-0.15	0.00	0.15	-0.29					
7. Female	0.34	0.48	0.00	0.01	0.00	-0.05	0.07	-0.02				
8. Age: 19 or less	0.01	0.09	0.08	0.06	0.00	-0.13	-0.07	0.07	-0.07			
9. Age: 20s	0.47	0.50	-0.15	0.09	0.00	0.04	0.19	-0.03	-0.10	-0.09		
10. Age: 30s	0.33	0.47	0.03	-0.10	0.00	0.09	-0.08	-0.01	0.01	-0.06	-0.66	
11. Age: 40s	0.11	0.31	0.09	-0.03	0.00	-0.11	-0.18	0.10	0.03	-0.03	-0.32	-0.24
12. Age: 50 and more	0.09	0.29	0.08	0.01	0.00	-0.04	0.01	-0.06	0.13	-0.03	-0.30	-0.22
13. Bachelor's degree or higher	0.61	0.49	-0.01	0.13	0.00	-0.05	0.16	-0.23	-0.02	0.07	-0.01	0.02
14. Have child(ren)	0.46	0.50	-0.05	-0.15	0.00	-0.07	-0.21	0.08	0.10	0.10	-0.24	0.03
15. Org tenure	5.50	5.08	0.06	0.07	0.00	-0.09	-0.03	0.04	-0.05	-0.08	-0.41	0.08
16. Work hours	39.73	6.76	-0.05	-0.08	0.00	0.18	-0.08	0.00	-0.08	0.00	-0.23	0.19
17. Full time employed	0.87	0.34	-0.10	-0.08	0.00	0.19	-0.09	0.11	-0.03	0.04	-0.22	0.22
18. Job level: Senior Mgr	0.01	0.09	0.07	-0.03	0.00	-0.05	0.02	-0.12	-0.07	-0.01	-0.09	-0.06
19. Job level: Middle Mgr	0.25	0.44	-0.06	-0.03	0.00	0.11	-0.06	0.05	-0.10	-0.05	-0.06	0.04
20. Job level: Employee	0.74	0.44	0.05	0.03	0.00	-0.10	0.06	-0.03	0.11	0.05	0.08	-0.02
21. Pay level (logged)	3.34[2)]	0.26	-0.10	-0.11	0.00	0.21	-0.11	-0.08	-0.15	-0.05	-0.22	0.11
22. Job satisfaction	2.44	0.97	-0.04	0.06	-0.07	-0.26	0.02	0.00	0.12	-0.04	-0.06	0.05
23. Affective commitment	2.46	0.91	0.04	0.02	0.09	-0.12	0.04	-0.08	0.13	-0.05	-0.06	0.07

Variables	11	12	13	14	15	16	17	18	19	20	21	22
12. Age: 50 and over	-0.11											
13. Bachelor's degree or higher	-0.10	0.08										
14. Have child(ren)	0.22	0.11	-0.04									
15. Org tenure	0.21	0.39	0.00	0.19								
16. Work hours	0.04	0.04	0.04	0.14	0.16							
17. Full time employed	-0.02	0.04	-0.01	0.21	0.15	0.74						
18. Job level: Senior Mgr	-0.03	0.29	0.07	0.10	0.17	0.00	0.04					
19. Job level: Middle Mgr	-0.08	0.15	0.04	0.18	0.33	0.26	0.22	-0.05				
20. Job level: Employee	0.08	-0.20	-0.06	-0.20	-0.36	-0.25	-0.23	-0.15	-0.98			
21. Pay level (logged)	0.10	0.11	0.29	0.26	0.25	0.55	0.50	0.12	0.43	-0.45		
22. Job satisfaction	-0.03	0.08	0.04	-0.02	-0.04	0.03	0.06	-0.09	0.06	-0.04	-0.01	
23. Affective commitment	-0.06	0.07	0.06	-0.02	-0.07	0.02	0.01	-0.11	0.11	-0.09	0.00	0.74

N = 246 (in 123 individuals)

Correlations with the absolute value larger than 0.13 are significant at p < 0.05 level.

1) These three variables are within-individual level variables. All the other variables are between-individual level variables. *2) The amount equals to 2,187.8 dollars.*

Table 3F. OLS Model Predicting Work Values (Study 2 of Paper 3)

	Variables	Dependent variables			
		Pay work value (Standardized)		Altruistic work value (Standardized)	
		Model C1	Model C2	Model D1	Model D2
	Constant	-4.21* (1.70)	-4.99** (1.72)	0.22 (1.66)	1.14 (1.66)
Sector	Private sector *(vs. public sector)*		0.40* (0.20)		-0.47* (0.19)
Controls	Female	-0.04 (0.20)	-0.03 (0.20)	0.11 (0.20)	0.10 (0.19)
	Age: 20s[1)]	1.28 (1.03)	1.42 (1.02)	0.94 (1.00)	0.77 (0.98)
	Age: 30s[1)]	1.36 (1.04)	1.51 (1.02)	0.63 (1.01)	0.46 (0.99)
	Age: 40s[1)]	0.98 (1.07)	1.08 (1.06)	0.33 (1.05)	0.22 (1.02)
	Age: 50 and over[1)]	1.33 (1.10)	1.50 (1.08)	0.72 (1.07)	0.52 (1.05)
	Bachelor's degree or higher	-0.26 (0.20)	-0.20 (0.20)	0.34† (0.20)	0.26 (0.20)
	Have child(ren)	-0.23 (0.20)	-0.24 (0.20)	-0.24 (0.20)	-0.22 (0.20)
	Org tenure	-0.03 (0.02)	-0.03 (0.02)	0.02 (0.02)	0.02 (0.02)
	Work hours	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)
	Full time employed	0.27 (0.42)	0.13 (0.42)	0.00 (0.41)	0.17 (0.41)
	Job level: Senior Mgr[2)]	-0.62 (1.10)	-0.43 (1.09)	-0.04 (1.07)	-0.27 (1.05)
	Jo level: Middle Mgr[2)]	0.07 (0.25)	0.02 (0.25)	-0.17 (0.25)	-0.12 (0.24)
	Pay level (logged)	0.97† (0.51)	1.05* (0.50)	-0.52 (0.50)	-0.61 (0.49)
	Job satisfaction	-0.17 (0.20)	-0.20 (0.19)	-0.37† (0.19)	-0.34 (0.19)
	Affective commitment	0.14 (0.19)	0.18 (0.19)	0.49* (0.19)	0.44 (0.19)
Model fit	R^2 (F)	0.14 (1.12)	0.17 (1.34)	0.18 (1.55)	0.22* (1.90)
	ΔR^2		0.03*		0.05*

N = 123 (individuals)

*† p < 0.10, * p < 0.05, ** p < 0.01*

Standard errors are shown in parentheses.

Table 3G. Paired Samples T-Test Results (Study 2 of Paper 3)

Outcome	Pay cut (PC)		Downsizing (DS)		Difference (PC – DS)					
	M	SD	M	SD	M (PC – DS)	Lower 95% CI[1)]	Upper 95% CI[1)]	t-value	p-value	Cohen's d
Threat to Pay level	4.38	0.84	3.10	1.28	1.29	1.03	1.54	10.01	0.00	1.28
Threat to altruistic value	2.59	1.09	2.66	1.08	-0.07	-0.24	0.09	-0.90	0.37	0.11

N = 246 (in 123 individuals)

1) CI: Confidence interval

Table 3H. OLS Model Predicting Pay-Level Satisfaction and Work Attitudes (Study 3 of Paper 3)

Variables		Dependent variables					
		Pay-Level satisfaction (Standardized)		Affective commitment (Standardized)		Job satisfaction (Standardized)	
		Model E1	Model E2	Model F1	Model F2	Model G1	Model G2
	Constant	0.13 (0.30)	-0.01 (0.29)	-0.45 (0.29)	-0.47 (0.29)	-0.32 (0.29)	-0.34 (0.29)
Payroll cost reduction	Pay cut *(vs. downsizing)*		-0.39** (0.06)				
	Both pay cut and downsizing *(vs. downsizing)*		-0.49** (0.04)				
	Neither pay cut nor downsizing *(vs. downsizing)*		0.19** (0.03)				
Mediator	Pay-level satisfaction (Standardized)			0.28** (0.01)	0.19** (0.02)	0.36** (0.01)	0.25** (0.02)
Moderator	Private sector *(vs. public sector)*			-0.04 (0.05)	0.04 (0.05)	-0.03 (0.05)	-0.03 (0.05)
Interaction effect	Pay-level satisfaction (Standardized) * Private sector				0.16** (0.03)		0.18** (0.03)
Controls	Region	Y	Y	Y	Y	Y	Y
	Industry	Y	Y	Y	Y	Y	Y
	Occupation	Y	Y	Y	Y	Y	Y
	Other characteristics	Y	Y	Y	Y	Y	Y
Model fit	R^2 (F)	0.06** (6.04)	0.11** (11.56)	0.15** (16.59)	0.16** (16.98)	0.16** (17.13)	0.17** (17.72)
	ΔR^2		0.06**		0.01**		0.01**

N = 4,355

*† p < 0.10, * p < 0.05, ** p < 0.01*

Standard errors are shown in parentheses.

APPENDIX 1A. Control Variables in the Analysis Model (Study 2 of Paper 1)

Control Variables		Description	Response Source
Workplace-level controls	**Industry**	Electricity, gas and water = 1, otherwise = 0	HR manager
		Construction = 1, otherwise = 0	
		Wholesale and retail = 1, otherwise = 0	
		Hotels and restaurants = 1, otherwise = 0	
		Transport and communication = 1, otherwise = 0	
		Financial services = 1, otherwise = 0	
		Other business services = 1, otherwise = 0	
		Public administration = 1, otherwise = 0	
		Education = 1, otherwise = 0	
		Health = 1, otherwise = 0	
		Other community services = 1, otherwise = 0	
		Reference group: Manufacturing	
	Workplace size	Continuous variable: Number of employees	
Individual-level controls	**Decrease in work hours**	If the employee's contracted working hours were reduced, access to paid overtime was restricted, or was required to take unpaid leave = 1, otherwise = 0	Individual employee
	Pay level	£61 - £100 per week (£3,121 - £5,200 per year) = 1, otherwise = 0	
		£101 - £130 per week (£5,201 - £6,760 per year) = 1, otherwise = 0	
		£131 - £170 per week (£6,761 - £8,840 per year) = 1, otherwise = 0	
		£171 - £220 per week (£8,841 - £11,440 per year) = 1, otherwise = 0	
		£221 - £260 per week (£11,441 - £13,520 per year) = 1, otherwise = 0	
		£261 - £310 per week (£13,521 - £16,120 per year) = 1, otherwise = 0	
		£311 - £370 per week (£16,121 - £19,240 per year) = 1, otherwise = 0	
		£371 - £430 per week (£19,241 - £22,360 per year) = 1, otherwise = 0	
		£431 - £520 per week (£22,361 - £27,040 per year) = 1, otherwise = 0	
		£521 - £650 per week (£27,041 - £33,800 per year) = 1, otherwise = 0	
		£651 - £820 per week (£33,801 - £42,640 per year) = 1, otherwise = 0	
		£821 - £1,050 per week (£42,641 - £54,600 per year) = 1, otherwise = 0	
		£1,051 or more per week (£54,601 or more per year) = 1, otherwise = 0	
		Reference group: £60 or less per week (£3,120 or less per year)	
	Gender	Female = 1, otherwise = 0	
	Age	20 to 29 = 1, otherwise = 0	
		30 to 39 = 1, otherwise = 0	
		40 to 49 = 1, otherwise = 0	
		50 to 59 = 1, otherwise = 0	
		60 or older = 1, otherwise = 0	
		Reference group: 19 or younger	
	Marital status	Married or living with a partner = 1, otherwise = 0	
	Workplace tenure	1 to less than 2 years = 1, otherwise = 0	
		2 to less than 5 years = 1, otherwise = 0	
		5 to less than 10 years = 1, otherwise = 0	
		10 years or more = 1, otherwise = 0	
		Reference group: Less than 1 year	
	Education	GCSE grades D-G/CSE grades 2-5, SCE O grades D-E/SCE Standard grades 4-7 = 1, otherwise = 0	
		GCSE grades A-C, GCE 'O'-level passes, CSE grade 1, SCE O grades A-C, SCE Standard grades 1-3 = 1, otherwise = 0	
		1 GCE 'A'-level grades A-E,1-2 SCE Higher grades A-C, AS levels	
		2 or more GCE 'A'-levels grades A-E, 3 or more SCE Higher grades A-C = 1, otherwise = 0	
		First degree, eg BSc, BA, BEd, HND, HNC, MA at first degree level = 1, otherwise = 0	
		Higher degree, eg MSc, MA, MBA, PGCE, PhD = 1, otherwise = 0	
		Other academic qualifications = 1, otherwise = 0	
		Reference group: No academic qualifications	

APPENDIX 1A. Control Variables in the Analysis Model (Study 2 of Paper 1, Continued)

Control Variables		Description	Response Source
Individual-level controls	**Occupation**	Professional occupations = 1, otherwise = 0 Associate professional and technical occupations = 1, otherwise = 0 Administrative and secretarial occupations = 1, otherwise = 0 Skilled trades occupations = 1, otherwise = 0 Personal service occupations = 1, otherwise = 0 Sales and customer service occupations = 1, otherwise = 0 Process, plant and machined operatives = 1, otherwise = 0 Elementary occupations = 1, otherwise = 0 Reference group: Managers and senior officials	Individual employee
	Temporary status	Temporary worker = 1, otherwise = 0	
	Union member	Union member = 1, otherwise = 0	
	Work hours	Continuous variable: Work hours	
	Autonomy	Average value of the responses to the following questions: In general, how much influence do you have over the following? 1) The tasks you do in your job 2) The pace at which you work 3) How you do your work 4) The order in which you carry out tasks 5) The time you start or finish your working day ($\alpha = 0.823$)	

APPENDIX 2A. Control Variables in the Analysis Model (Study 2A of Paper 2)

Control Variables		Description	Response Source
Workplace-level controls	**Industry**	Electricity, gas and water = 1, otherwise = 0	HR manager
		Construction = 1, otherwise = 0	
		Wholesale and retail = 1, otherwise = 0	
		Hotels and restaurants = 1, otherwise = 0	
		Transport and communication = 1, otherwise = 0	
		Financial services = 1, otherwise = 0	
		Other business services = 1, otherwise = 0	
		Public administration = 1, otherwise = 0	
		Education = 1, otherwise = 0	
		Health = 1, otherwise = 0	
		Other community services = 1, otherwise = 0	
		Reference group: Manufacturing	
	Workplace size	Continuous variable: Number of employees	
Individual-level controls	**Decrease in work hours**	If the employee's contracted working hours were reduced, access to paid overtime was restricted, or was required to take unpaid leave = 1, otherwise = 0	Individual employee
	Pay level	£61 - £100 per week (£3,121 - £5,200 per year) = 1, otherwise = 0	
		£101 - £130 per week (£5,201 - £6,760 per year) = 1, otherwise = 0	
		£131 - £170 per week (£6,761 - £8,840 per year) = 1, otherwise = 0	
		£171 - £220 per week (£8,841 - £11,440 per year) = 1, otherwise = 0	
		£221 - £260 per week (£11,441 - £13,520 per year) = 1, otherwise = 0	
		£261 - £310 per week (£13,521 - £16,120 per year) = 1, otherwise = 0	
		£311 - £370 per week (£16,121 - £19,240 per year) = 1, otherwise = 0	
		£371 - £430 per week (£19,241 - £22,360 per year) = 1, otherwise = 0	
		£431 - £520 per week (£22,361 - £27,040 per year) = 1, otherwise = 0	
		£521 - £650 per week (£27,041 - £33,800 per year) = 1, otherwise = 0	
		£651 - £820 per week (£33,801 - £42,640 per year) = 1, otherwise = 0	
		£821 - £1,050 per week (£42,641 - £54,600 per year) = 1, otherwise = 0	
		£1,051 or more per week (£54,601 or more per year) = 1, otherwise = 0	
		Reference group: £60 or less per week (£3,120 or less per year)	
	Gender	Female = 1, otherwise = 0	
	Age	20 to 29 = 1, otherwise = 0	
		30 to 39 = 1, otherwise = 0	
		40 to 49 = 1, otherwise = 0	
		50 to 59 = 1, otherwise = 0	
		60 or older = 1, otherwise = 0	
		Reference group: 19 or younger	
	Marital status	Married or living with a partner = 1, otherwise = 0	
	Workplace tenure	1 to less than 2 years = 1, otherwise = 0	
		2 to less than 5 years = 1, otherwise = 0	
		5 to less than 10 years = 1, otherwise = 0	
		10 years or more = 1, otherwise = 0	
		Reference group: Less than 1 year	
	Education	GCSE grades D-G/CSE grades 2-5, SCE O grades D-E/SCE Standard grades 4-7 = 1, otherwise = 0	
		GCSE grades A-C, GCE 'O'-level passes, CSE grade 1, SCE O grades A-C, SCE Standard grades 1-3 = 1, otherwise = 0	
		1 GCE 'A'-level grades A-E,1-2 SCE Higher grades A-C, AS levels	
		2 or more GCE 'A'-levels grades A-E, 3 or more SCE Higher grades A-C = 1, otherwise = 0	
		First degree, eg BSc, BA, BEd, HND, HNC, MA at first degree level = 1, otherwise = 0	
		Higher degree, eg MSc, MA, MBA, PGCE, PhD = 1, otherwise = 0	
		Other academic qualifications = 1, otherwise = 0	
		Reference group: No academic qualifications	

APPENDIX 2A. Control Variables in the Analysis Model (Study 2A of Paper 2, Continued)

Control Variables		Description	Response Source
Individual-level controls	**Occupation**	Professional occupations = 1, otherwise = 0	Individual employee
		Associate professional and technical occupations = 1, otherwise = 0	
		Administrative and secretarial occupations = 1, otherwise = 0	
		Skilled trades occupations = 1, otherwise = 0	
		Personal service occupations = 1, otherwise = 0	
		Sales and customer service occupations = 1, otherwise = 0	
		Process, plant and machined operatives = 1, otherwise = 0	
		Elementary occupations = 1, otherwise = 0	
		Reference group: Managers and senior officials	
	Temporary status	Temporary worker = 1, otherwise = 0	
	Union member	Union member = 1, otherwise = 0	
	Work hours	Continuous variable: Work hours	
	Autonomy	Average value of the responses to the following questions: In general, how much influence do you have over the following? 1) The tasks you do in your job 2) The pace at which you work 3) How you do your work 4) The order in which you carry out tasks 5) The time you start or finish your working day ($\alpha = 0.823$)	

APPENDIX 2B. Control Variables in the Analysis Model (Study 2B of Paper 2)

Control Variables		Description
Organization characteristics	**Industry**	Mining and quarrying = 1, otherwise = 0
		Manufacturing = 1, otherwise = 0
		Electricity, gas, steam and air conditioning supply = 1, otherwise = 0
		Water supply, sewerage, waste management and remediation activities = 1, otherwise = 0
		Construction = 1, otherwise = 0
		Wholesale and retail trade; repair of motor vehicles and motorcycles = 1, otherwise = 0
		Transportation and storage = 1, otherwise = 0
		Accommodation and food service activities = 1, otherwise = 0
		Information and communication = 1, otherwise = 0
		Financial and insurance activities = 1, otherwise = 0
		Real estate activities = 1, otherwise = 0
		Professional, scientific and technical activities = 1, otherwise = 0
		Administrative and support service activities = 1, otherwise = 0
		Public administration and defense; compulsory social security = 1, otherwise = 0
		Education = 1, otherwise = 0
		Human health and social work activities = 1, otherwise = 0
		Arts, entertainment and recreation = 1, otherwise = 0
		Other service activities = 1, otherwise = 0
		Activities of households as employers = 1, otherwise = 0
		Activities of extraterritorial organizations and bodies = 1, otherwise = 0
		Reference group: Agriculture, forestry and fishing
	Sector	Private sector = 1, otherwise (public, non-profit and other) = 0
	Organization size	From 100 to 500 employees = 1, otherwise = 0
		From 500 to 1,000 employees = 1, otherwise = 0
		From 1,000 to 5,000 employees = 1, otherwise = 0
		More than 5,000 employees = 1, otherwise = 0
		Reference group: Less than 100 employees
Individual characteristics	**Age**	Age in years
	Permanent status	Permanent employee = 1, otherwise = 0
	Gender	Female = 1, otherwise = 0
	Marital status	Married = 1, otherwise = 0
	Work hours	Contracted work hours per week
	Organizational tenure	Tenure in years
	Pay level	Log_{10} of hourly pay in United States dollars
	Occupation	Managers = 1, otherwise = 0
		Professionals = 1, otherwise = 0
		Technical and associate professionals = 1, otherwise = 0
		Clerical support workers = 1, otherwise = 0
		Service and sales workers = 1, otherwise = 0
		Skilled agricultural, forestry and fishery workers = 1, otherwise = 0
		Craft and related trades workers = 1, otherwise = 0
		Plant and machine operators, and assemblers = 1, otherwise = 0
		Elementary occupations = 1, otherwise = 0
		Reference group: Armed forces occupations

Appendix 3A. Control Variables in the Analysis Model (Studies 1 and 3 of Paper 3)

Control Variables		Description
Region		Dublin = 1, otherwise = 0
		Mid-East = 1, otherwise = 0
		Midlands = 1, otherwise = 0
		Mid-West = 1, otherwise = 0
		South-East = 1, otherwise = 0
		South-West = 1, otherwise = 0
		West = 1, otherwise = 0
		Reference group: Border
Industry		Construction = 1, otherwise = 0
		Wholesale and retail = 1, otherwise = 0
		Hotels and restaurant = 1, otherwise = 0
		Transport, storage, communication =1, otherwise = 0
		Financial and other business activities = 1, otherwise = 0
		Public admin and defense =1, otherwise = 0
		Education = 1, otherwise = 0
		Health = 1, otherwise = 0
		Other services = 1, otherwise = 0
		Reference group: Production
Occupation		Professionals = 1, otherwise = 0
		Associate professional and technical = 1, otherwise = 0
		Clerical and secretarial = 1, otherwise = 0
		Craft and related = 1, otherwise = 0
		Personal and protective services = 1, otherwise = 0
		Sales = 1, otherwise = 0
		Plant and machine operatives = 1, otherwise = 0
		Other = 1, otherwise = 0
		Reference group: Managers and administrators
Other characteristics	**Organization size**	Organization with 100 to 499 employees = 1, otherwise = 0
		Organization with 500 or more employees = 1, otherwise = 0
		Reference group: Organization with 99 or less employees
	Job level	Senior management position = 1, otherwise = 0
		Middle management position = 1, otherwise = 0
		Supervisor = 1, otherwise = 0
		Reference group: Employee
	Work hours	Work hours (continuous variable)
	Permanent status	Permanent = 1, otherwise = 0
	Organization tenure	Organizational tenure in months (Continuous variable, capped at 480)
	Union member	Union member = 1, otherwise = 0
	Gender	Female = 1, otherwise = 0
	Marital status	Married = 1, otherwise = 0
	Age	Age (Continuous variable, floored and capped at 17 and 66, respectively)
	Highest level of education	Some secondary (no exam) = 1, otherwise = 0
		Junior/Inter/Group certificate/lower second level = 1, otherwise = 0
		Leaving Certificate/upper second level = 1, otherwise = 0
		PLC, Certificate or diploma = 1, otherwise = 0
		Third Level Bachelors Degree = 1, otherwise = 0
		Postgraduate degree = 1, otherwise = 0
		Other = 1, otherwise = 0
		Reference group: None/Primary Certificate or equivalent
	Hourly earnings	Log(Hourly earnings)
	Weakly income	Log(Weakly income)